



New connection on: : 20-11-2020 : 17:41:08 - Last disconnection on: : 20-11-2020 : 17:27:42

V 4.0.0.44803(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201820)) (RPM D201820)

Welcome to EPOQUE Rebuild under the Production Environment

[EPODOC: SS 6] (traffic 1d light) and smart and solar

Results in EPODOC 7

[SS 7] ..li



1/7 © EPODOC / EPO

PN - [KR102089507B](#) B1 20200526
PR - KR20190137746 20191031
AP - KR20190137746 20191031
DT - I
CT - || STSE (B1)
[KR100799067B](#) B1 20080129 [] (YU BYEONG MU [KR])
CCA - [Y02E10/50](#)
CI - G01D21/02 (KR)
- G08G1/0116 (KR)
- G08G1/054 (KR)
- G08G1/075 (KR)
- G08G1/087 (KR)
- G08G1/095 (KR)
- G08G1/097 (KR)
- H02S40/38 (KR)
CA - Y02E10/50 (EP)
PA - SEJONGSHINHOENERGY [KR]
TI - Traffic signal controller of **smart** type
AB - The present invention relates to an intelligent traffic signal controller for preventing a malfunction, which can stably secure the accuracy of a traffic signal control action since a detection function of an image detector is not degraded even in a weather condition such as rain or snow, and can convert an operation of a corresponding **traffic light** into an operation mode corresponding to an existing general traffic signal controller while promptly and automatically recognizing a corresponding issue when an abnormality occurs in the image detector to transmit information thereon to a remote integrated management server in real time. According to the present invention, the intelligent traffic signal controller for preventing a malfunction comprises an intelligent traffic signal control module, a housing, a rain sensor, a temperature sensor, a control unit, a detector waterproof

loop module, a **solar** power generation unit, first and second communication modules, and a detector monitoring module (800). The detector waterproof loop module includes a base plate, a forward and reverse rotation motor, a decelerator, a pinion, an awning cover, a rotation driving unit, a heating wire switching unit, a camera module, and a second short-range wireless communication module.

2/7 © EPODOC / EPO

- PN - [KR102103020B](#) B1 20200423
- PR - KR20190124699 20191008
- AP - KR20190124699 20191008
- DT - I
- CT - || STSE (B1)
[KR101824909B](#) B1 20180202 [] (DAE SANG DESIGN [KR]);
[KR102015787B](#) B1 20190829 [] (KIM BYOUNG NO [KR]);
[KR20190074272](#) A 20190627 [] (MOA E&C CO LTD [KR]);
[US2017318923](#) A1 20171109 [] (GHARABEGIAN ARMEN SEVADA [US], et al)
- CCA - [Y02E10/50](#)
- CI - A45B3/08 (KR)
A45B23/00 (KR)
A45B25/143 (KR)
A47C7/748 (KR)
G08B7/06 (KR)
G08B21/02 (KR)
G08G1/09 (KR)
G09F9/00 (KR)
H02J7/0042 (KR)
H02S20/20 (KR)
- CA - A45B2023/0062 (KR)
A45B2023/0093 (KR)
A45B2200/1027 (KR)
A45B2200/1045 (KR)
Y02E10/50 (EP)
- PA - KIM SEONG TAE [KR]
- TI - **SMARTSHADE CANOPY APPARATUS**
- AB - The present invention relates to a **smart** shade canopy, and more particularly, to a **smart** shade canopy capable of providing pedestrians with a comfortable space while avoiding rain or sunlight when installed at a pedestrian safety zone on a pedestrian crossing or a bus stop, interlocking with various information (weather information / disaster information / **traffic light** signal information / driving information on running vehicles, etc.) via Internet of Things (IoT) or Information and Communication Technology (ICT) to provide automatic opening and shutting of the shade canopy, and providing various conveniences and safety via various information and emergency bell, water mist spraying function, charging function, advertisement function, **solar** power generation function, etc.

3/7 © EPODOC / EPO

- PN - [CN110211400](#) A 20190906
- PR - CN201910487810 20190605

AP - CN201910487810 20190605

DT - I

CT - || STSE (A)
US2016005313 A1 20160107 [A] (CHOLAYIL SAMEER [US])
 [A] 1-3
 * 全文 *;
CN107093979 A 20170825 [A] (HE SHENGLI)
 [A] 1-3
 * 全文 *;
CN107104268 A 20170829 [A] (MAANSHAN JIUZHI INFORMATION TECH CO LTD)
 [A] 1-3
 * 全文 *;
CN108053754 A 20180518 [Y] (NINGBO YINZHOU ZHIBAN INFORMATION TECH CO LTD)
 [Y] 1-3
 * 说明书第[0025]段 *;
CN108224334 A 20180629 [Y] (ZHUJI JIMAILUO IMP AND EXPORT CO LTD)
 [Y] 6
 * 说明书第[0002]段、第[0015]-[0016]段 *;
CN108418049 A 20180817 [Y] (GUANGZHOU DIYUE NETWORK TECH CO LTD)
 [Y] 1-3
 * 说明书第[0015]段以及附图2 *;
CN108418516 A 20180817 [A] (YIWU ZHIXIN TECH CO LTD)
 [A] 1-3
 * 全文 *;
CN207895698U U 20180921 [Y] (TAIZHOU LAIZHI TECH CO LTD)
 [Y] 1-3
 * 说明书第[0005]-[0006]段以及附图1 *;
CN208299223U U 20181228 [Y] (GUIZHOU TIANDITAI WHOLE SET ELECTRICAL EQUIPMENT CO LTD)
 [Y] 5
 * 说明书第[0005]段以及附图1 *;
CN109296221 A 20190201 [Y] (YUNNAN CHENGSHENG TECH CO LTD)
 [Y] 1-3
 * 说明书第[0018]段以及附图1 *;
CN109404836 A 20190301 [A] (WUHU XINSHUN ENERGY SAVING TECH SERVICE CO LTD)
 [A] 1-3
 * 全文 *

CCA - Y02E10/50

CI - G08G1/0955 (CN)
 - H02S20/32 (CN)

CA - Y02E10/50 (EP)

PA - GUANGZHOU DIYUE NETWORK TECH CO LTD

TI - Annular **smart** city **traffic light**

AB - The invention discloses an annular **smart** city **traffic light** comprising a box, wherein a motor starts to drive the rotation of a rotating rod, the rotating rod rotates to push a sliding block to move downward through transmission, the sliding block moves downward to cause the support plates on both sides to slide on the ground and away from each other, a support mechanism can support the **traffic light** on the ground and prevent the **traffic light** from being blown by the strong wind when used,

a parachute mechanism can provide a function of shading or rain protection for the traffic commander, and a **solar** panel can move and rotate at a certain angle to provide power for the **traffic light**.

4/7 © EPODOC / EPO

- PN - [CN109817003](#) A 20190528
- PR - CN201910259772 20190402
- AP - CN201910259772 20190402
- DT - I
- PA - EMPERYLANDSMARTENERGYZHEJIANGCOLTD
- TI - Electric supply **smart traffic light**
- AB - The invention discloses an electric supply **smart traffic light** which comprises a supporting column. A short-range traffic lamp is arranged at the top of the supporting column. An indication change lamp bar is arranged at one side of the bottom of the supporting column, a control board is arranged at one side of the supporting column, a control button matched with the control board is arranged at the side, away from the supporting column, of the control board, a connection control box matched with the supporting column is arranged at the top of the supporting column, a power box is arranged inside the connection control box, a protective glass cover is arranged at the top end of the connection control box, the arm of the protective glass cover is symmetrically provided with a **solar** cell panel matched with the protective glass cover, a light energy transmission rod is arranged at the side, away from of the protective glass cover, of the **solar** cell panel, a conversion box matched with the light energy transmission rod is arranged at the end, away from the **solar** cell panel, of the light energy transmission rod, and the bottom end of the conversion box is provided with a connecting rod matched with a power box. The **traffic light** has the advantages that it is effectively ensured that the **traffic light** can send signals of the **traffic light** to remind people in a more clear-cut mode, and the **traffic light** can be more convenient to use.

5/7 © EPODOC / EPO

- PN - [CN208834496U](#) U 20190507
- PR - CN201820996554U 20180627
- AP - CN201820996554U 20180627
- DT - I
- PA - JIANGSU XINSHUNDA SMART LIGHTING TECH CO LTD
- TI - **Smart** city intelligent **traffic light**
- AB - The utility model discloses a **smart** city intelligent **traffic light** in the technical field of traffic lights. Bottom plate, four groups of universal wheels are uniformly arranged at the bottom of the bottom plate; the top of the bottom plate is connected with a telescopic device; the telescopic device comprises a fixed rod connected with the top of the bottom plate; a telescopic rod is arranged at the top of the fixed rod; the top of the telescopic rod is connected with the signal lamp pole; the bottom of the telescopic rod extends to an inner cavity of the fixing rod and is connected with an adjusting spring. The bottom of the adjusting spring is connected with the bottom of an inner cavity of the fixing rod. a positioning bolt is arranged at the top of the right outer wall of the fixed rod; a supporting rod is arranged on the left side of the top of the supporting plate; the top of the supporting rod is connected with the **solar** panel, and the traffic lights are placed at the crossroad to replace manual traffic operation commanding, so that the working intensity of traffic police is reduced, the

traffic operation is commanded more accurately and quickly, traffic jam is prevented, the probability of traffic accidents is reduced, and normal traveling of pedestrians is guaranteed.

6/7 © EPODOC / EPO

- PN - [CN108396675](#) A 20180814
- PR - CN201810386738 20180426
- AP - CN201810386738 20180426
- DT - I
- CCA - [Y02E10/50](#)
- CI - E01F9/582 (CN)
- G08G1/07 (CN)
- G08G1/095 (CN)
- H02S10/00 (CN)
- CA - Y02E10/50 (EP)
- PA - EMPERYLAND NEW ENERGY TECH SHANGHAI CO LTD
- TI - Rectangular **solar smart** zebra crossing
- AB - The invention discloses a rectangular **solar smart** zebra crossing. The zebra crossing includes fireproof ABS bases, antiskid tempered glass layers, light source layers, microwave radar devices, control circuits, polycrystalline silicon power generating boards, a street lamp signal sending device, a street lamp signal receiving device, an information receiving and processing controller, multiple **solar smart** bricks, an infrared trigger and a **smart** zebra crossing body; the **smart** zebra crossing body is composed of the **solar smart** bricks, and each **solar smart** brick is composed of the corresponding fireproof ABS base, the corresponding antiskid tempered glass layer, the corresponding light source layer, the corresponding microwave radar device, the corresponding control circuit and the corresponding polycrystalline silicon power generating board. Each light source layer is arranged on the inner side of the corresponding fireproof ABS base, a street lamp control signal is received through a **solar smart** brick controller, and a **smart** brick set of an intersection is compiled and controlled to achieve the effects of the **smart** zebra crossing; the indication and guidance function of a **traffic light** is enhanced, the road safety is improved, and intelligentization of the intersection of a road is achieved, so that a part of an overall framework of an inland green **smart** city is constructed.

7/7 © EPODOC / EPO

- PN - [CN107630414](#) A 20180126
- PR - CN201711141241 20171117
- AP - CN201711141241 20171117
- DT - I
- PA - EMPERYLAND NEW ENERGY TECH SHANGHAI CO LTD
- TI - **Solar smart** zebra crossing
- AB - The invention discloses a **solar smart** zebra crossing. The **solar smart** zebra crossing comprises an anti-skid tempered glass layer, a light source layer, a polycrystalline silicon electricity generation plate, a fireproof ABS pedestal, a **smart** brick body, a **traffic light**, a **traffic light** signal transmitting device, a **traffic light** signal receiving device and a controller; the anti-skid tempered glass layer is arranged at the upper end of the **smart** brick body; the light source layer is arranged at the lower end of the anti-skid tempered glass layer; the polycrystalline silicon electricity generation

plate is arranged at the lower end of the light source layer; the fireproof ABS pedestal is arranged at the lower end of the **smart** brick body; the **smart** brick body is electrically connected with the controller; the controller is electrically connected with the **traffic light** signal receiving device; the controller is used for receiving a digital signal, compiling and outputting a graph, so that the stage of a street lamp and a signal lamp are synchronous and corresponding to the graph of the zebra crossing; and a **solar smart** brick controller receives the **traffic light** control signal, compiles and controls a **smart** brick group at the intersection to achieve the effect of the **smart** zebra crossing and provide great help to people.

[SS 7] (traffic light) and solar

Results in EPODOC 594

[SS 8] 7 and control+

Results in EPODOC 345

[SS 9] 8 and /IC (G08G)

Results in EPODOC 291

[SS 10] ..li 1-80



1/291 © EPODOC / EPO

PN - [CN210924938U](#) U 20200703

PR - CN201921256018U 20190805

AP - CN201921256018U 20190805

DT - I

PA - GUANGDONG XINYAO CONSTRUCTION CO LTD

TI - **Traffic light**

AB - The utility model provides a traffic indicating lamp. Including an intermediate strut, a light **controller** is arranged in the middle of the middle strut; an intermediate scintillator is arranged above the light **controller**; a starting lamp and a stopping lamp are arranged on the two sides of the middle flasher respectively, a **solar** cell panel is arranged above the starting lamp, the stopping lamp and the middle flasher, an indicator lamp **controller** is arranged below the middle supporting column, and the indicator lamp **controller** is electrically connected with the **solar** cell panel, the lamp light controller, the starting lamp, the stopping lamp and the middle flasher in sequence. According to the **solar traffic light**, the **solar** cell panel is used for providing power for the **traffic light**, meanwhile, the light **controller** is arranged, convenience is provided for some special environments, and the middle flasher is arranged and can be used in emergency circumstances. The device can be suitable for different working conditions and different environments, and is very simple and convenient to operate.

2/291 © EPODOC / EPO

PN - [CN210895831U](#) U 20200630

PR - CN201921549109U 20190913

AP - CN201921549109U 20190913

DT - I

PA - CHANGZHOU SHUNYE GUARDRAIL CO LTD

TI - **Traffic light** synchronous guardrail

AB - The utility model discloses a **traffic light** synchronous guardrail. The guardrail comprises a guardrail body, a **solar** panel, a first support, an electric box **controller**, a second support, a **traffic light** set, an exhaust groove, a transverse frame, a vertical frame, a base and a battery box. The first support and the second support are arranged at the two ends of the guardrail body respectively. The first support and the second support are connected through the cross beam. The plurality of vertical frames are arranged in the middle of the cross beam; exhaust grooves are formed in the two sides of the vertical frame. The two sides of the top end of the transverse frame are each provided with a plurality of **traffic light** sets. A **solar** panel is arranged at the top of the cross beam; electric box **controllers** and traffic lights are arranged at the two ends of the **solar** panel, when the night comes, the traffic lights can also be used as street lamps to illuminate passersby and drivers, and the traffic lights can also play a role in warning the passersby and the drivers, so that motor vehicles and pedestrians can pass through the red street lamp intersection more safely and quickly.

3/291 © EPODOC / EPO

PN - [CN210836557U](#) U 20200623

PR - CN201921968757U 20191107

AP - CN201921968757U 20191107

DT - I

PA - HOHAI UNIV WENTIAN COLLEGE

TI - **Traffic light control** device

AB - The utility model discloses a **traffic light control** device. The flashlight comprises a shell, a small flashlight body and a warning lamp. A cover plate is arranged on one side of the shell; a **solar** cell panel is arranged at the top of the cover plate; a key is mounted at the top of the shell through a mounting groove; a warning lamp is mounted on one side of the key through a fixing groove; a dot matrix display screen is mounted on the other side of the key through a mounting groove; a wireless transmission antenna is installed at one end of the shell through a fixing groove. A small flashlight is installed on one side of the wireless transmission antenna through an installation groove, a circuit installation plate is fixed to the bottom in the shell through screws, a wireless data transmission chip is welded to one end of the top of the circuit installation plate, and the wireless data transmission chip is electrically connected with the wireless transmission antenna. The multifunctional flashlight can save electric power, has the functions of the flashlight and the interphone, can emit warning light to remind passing vehicle personnel of the position when a traffic police is on duty, and is suitable for being widely popularized and used.

4/291 © EPODOC / EPO

PN - [KR102089507B](#) B1 20200526

PR - KR20190137746 20191031

AP - KR20190137746 20191031

DT - I

CT - || STSE (B1)

- CCA - [Y02E10/50](#)
- CI - G01D21/02 (KR)
 - G08G1/0116 (KR)
 - G08G1/054 (KR)
 - G08G1/075 (KR)
 - G08G1/087 (KR)
 - G08G1/095 (KR)
 - G08G1/097 (KR)
 - H02S40/38 (KR)
- CA - Y02E10/50 (EP)
- PA - SEJONGSHINHOENERGY [KR]
- TI - Traffic signal **controller** of smart type
- AB - The present invention relates to an intelligent traffic signal **controller** for preventing a malfunction, which can stably secure the accuracy of a traffic signal **control** action since a detection function of an image detector is not degraded even in a weather condition such as rain or snow, and can convert an operation of a corresponding **traffic light** into an operation mode corresponding to an existing general traffic signal **controller** while promptly and automatically recognizing a corresponding issue when an abnormality occurs in the image detector to transmit information thereon to a remote integrated management server in real time. According to the present invention, the intelligent traffic signal **controller** for preventing a malfunction comprises an intelligent traffic signal **control** module, a housing, a rain sensor, a temperature sensor, a **control** unit, a detector waterproof loop module, a **solar** power generation unit, first and second communication modules, and a detector monitoring module (800). The detector waterproof loop module includes a base plate, a forward and reverse rotation motor, a decelerator, a pinion, an awning cover, a rotation driving unit, a heating wire switching unit, a camera module, and a second short-range wireless communication module.

5/291 © EPODOC / EPO

- PN - [CN210534999U](#) U 20200515
- PR - CN201921524702U 20190915
- AP - CN201921524702U 20190915
- DT - I
- PA - SICHUAN HUIFANG TONGDA TECH CO LTD
- TI - Movable temporary **traffic light**
- AB - The utility model discloses a movable temporary **traffic light**. Support frame, traffic lights are fixedly installed on the outer surface of the upper end of the supporting frame. A **solar** cell panel is fixedly installed on the outer surface of the upper end of the **traffic light**. A **control** box is fixedly mounted on the outer surface of the lower end of the support frame; a storage battery and a **controller** are arranged in the **control** box; four supporting legs are movably mounted on the inner surface of the lower end of the **control** box; the inner walls of the four supporting legs are in threaded connection with adjusting rods; and connecting plates are fixedly mounted on the outer surfaces of the lower ends of the four adjusting rods correspondingly, universal wheels are fixedly mounted on the outer surfaces of the lower ends of the four connecting plates correspondingly, fixing plates are fixedly mounted on the outer surfaces of one sides of the four universal wheels correspondingly, and bolts

are in threaded connection with the outer surfaces of the upper ends of the four fixing plates correspondingly. According to the temporary **traffic light**, a user can conveniently maintain the **control** box in a horizontal state on an uneven or inclined road surface, and the stability of the temporary **traffic light** is improved.

6/291 © EPODOC / EPO

PN - [CN210488808U](#) U 20200508
 PR - CN201921794917U 20191024
 AP - CN201921794917U 20191024
 DT - I
 PA - CHINA RAILWAY FIRST GROUP ELECTRICAL ENG CO LTD
 TI - Rail transit indicating lamp with bird repelling function
 AB - The utility model discloses a rail transit indicating lamp with a bird repelling function. Including a base, the top of the base is fixedly connected with a supporting column. The top of the supporting column is fixedly connected with a supporting rod; one end of the support rod is connected with a lamp tube; lamp tube in square tube shape, a plurality of indication signal lamps are embedded in the front side surface of the lamp tube; a storage battery and a **controller** are arranged on the inner side of the lamp tube; a buzzer is mounted at the top of the lamp tube; supporting rods are fixed to the tops of the lamp tubes and the tops of the supporting rods. The top of the supporting rod is connected with an arc-shaped bird repelling plate; spines are uniformly and densely distributed on the surface of the top of the arc-shaped bird repelling plate; the upper end of one side of the supporting column is connected with a first auxiliary supporting rod; according to the **solar traffic light**, birds are prevented from falling on the whole **traffic light**, and the working safety of the whole **traffic light** is guaranteed.

7/291 © EPODOC / EPO

PN - [CN111127918](#) A 20200508
 PR - CN201911253233 20191209
 AP - CN201911253233 20191209
 DT - I
 CI - G03B21/14 (CN)
 - G03B21/608 (CN)
 - G08G1/005 (CN)
 - G08G1/09 (CN)
 - G08G1/095 (CN)
 PA - UNIVSOUTHEAST
 TI - Signal lamp **control** device for preventing red light running near intersection
 AB - The invention relates to a signal lamp **control** device for preventing a red light running behavior near an intersection. The signal lamp **control** device comprises an intelligent **solar** panel, a virtual curtain wall projection device, and a curtain wall induction and law violation detection device, wherein the virtual curtain wall projection device and the curtain wall induction and law violation detection device are disposed on a projection column. The signal lamp **control** device is suitable for signal intersections with large traffic flow and pedestrian flow, a dynamic curtain wall with color prompts is projected by means of the projection device to replace traditional lamp post type or stand column type traffic lights, and a traffic manager can adjust and set parameters of the position, the width and the height of the curtain

wall according to the specific conditions of the intersections. Due to the fact that the air projection and interaction technology is adopted, when violators run the red **light** or **traffic** accidents happen, emergency treatment measures such as voice character warning or red flashing prompting can be taken by adjusting the preset picture.

8/291 © EPODOC / EPO

PN - [KR20200044605](#) A 20200429
 PR - KR20180125596 20181020
 AP - KR20180125596 20181020
 DT - I
 PA - PARK YU BIN [KR]
 TI - Auto **traffic light controller** by laser
 AB - The present invention provides a laser traffic signal **control** system, which attaches a laser sensor capable of measuring a distance to an existing **traffic light** to grasp a vehicle line waiting at each intersection, lengthens a traffic signal of a long waiting line, so as to integrally **control** the traffic flow. The auto-**controller** of a laser **traffic** signal **light** includes a laser distance measuring sensor, a rotating plate and a rotating motor, a **control** system circuit board, a **solar** panel and a **solar** charging battery, and an external power supply device.

9/291 © EPODOC / EPO

PN - [CN111105632](#) A 20200505
 PR - CN201811262613 20181027
 AP - CN201811262613 20181027
 DT - I
 CI - E01F9/604 (CN)
 - E01F9/615 (CN)
 - E01F9/696 (CN)
 - E01F15/14 (CN)
 - G08G1/095 (CN)
 - H02J7/35 (CN)
 PA - YANGZHOU WANDA PHOTOVOLTAIC CO LTD
 TI - **Traffic light** with anti-collision stand column
 AB - The invention discloses a **traffic light** with an anti-collision stand column in the technical field of traffic lights. The light comprises a lamp post. Traffic lights are arranged on the outer wall of the top of the lamp post. A dustproof and rainproof plate is arranged at the top of the **traffic light**. The bottom of the outer wall of the lamp post is sleeved with an anti-collision stand column. Light-emitting assemblies are evenly arranged on the outer wall of the anti-collision stand column. The anti-collision stand column comprises an installation sleeve arranged on the outer wall of the lamp post in a sleeving mode. A fixed block assembly is arranged on the outer wall of the mounting sleeve. The fixed block assemblies are distributed on the outer wall of the mounting sleeve in an annular array form. The fixing block assembly is connected with the inner wall of the filling layer through buffer columns. The storage battery is electrically connected with the **traffic light control** box, the traffic lights, the **solar** panel and the light-emitting assembly. The anti-collision stand column is provided with a filling layer filled with yellow sand to weaken the collision force, a buffer column in an inner cavity of the filling layer deforms to generate elastic force

to further weaken the collision force, and a running water lamp light-emitting assembly arranged on the outer wall of the anti-collision stand column gives an alarm to passing vehicles to prevent the vehicles from colliding with traffic lights.

10/291 © EPODOC / EPO

- PN - [CN210377836U](#) U 20200421
- PR - CN201921672453U 20191008
- AP - CN201921672453U 20191008
- DT - I
- PA - HUA IYIN INST TECHNOLOGY
- TI - Sidewalk lamp post intelligent **control** device
- AB - The utility model discloses an intelligent sidewalk lamp post **control** device which comprises a lamp post, a 51 single-chip microcomputer **controller**, an air quality sensor, a temperature sensor, a humidity sensor, an illumination intensity sensor, a display screen, a **solar** panel and an LED **traffic light**. The 51 single-chip microcomputer **controller** updates the air quality, temperature and humidity data of the display screen in real time according to the air quality sensor, the temperature sensor and the humidity sensor, and adjusts the intensity of the LED **traffic light** according to the illumination intensity sensor; the display screen is used for displaying external air quality, temperature, humidity, public service advertisements and other data. According to the intelligent **control** device for the sidewalk lamp post, the intelligence of the lamp post is enhanced, and the lamp post has the functions of air quality, temperature, humidity and advertising at the same time.

11/291 © EPODOC / EPO

- PN - [CN110969882](#) A 20200407
- PR - CN201911257901 20191210
- AP - CN201911257901 20191210
- DT - I
- CI - B08B3/02 (CN)
- B08B13/00 (CN)
- G08G1/095 (CN)
- PA - YANGZHOU LUOFENGCHENG INFORMATION TECH CO LTD
- TI - Self-cleaning type **solar traffic light** and **control** system thereof
- AB - The invention discloses a self-cleaning type **solar traffic light**, and relates to the technical field of road **traffic**. The **light** comprises a support base, a lamp post is fixedly mounted in the middle of the top of the supporting base. A mounting plate is fixedly mounted on the right side of the top of the lamp post; a support frame is fixedly mounted at the top of the mounting plate; a connecting rod is fixedly installed on the left side of the lamp post, a **traffic light control** box is fixedly installed on the left side of the connecting rod, a top plate is fixedly installed on the outer side of the top of the **traffic light control** box, a fixing frame is fixedly installed in the middle of the bottom of the top plate, and a water distribution pipe is fixedly installed in the fixing frame. According to the self-cleaning type **solar traffic light**, dust on the surface of the signal light is flushed by arranging the water storage tank and the spray head, the signal light is kept clean, water after flushing enters a sewer from the water outlet pipeline by arranging the water outlet plate and the water outlet pipeline, a road cannot be polluted, and the self-cleaning type **solar traffic light** is clean and environmentally friendly.

12/291 © EPODOC / EPO

PN - [CN110969880](#) A 20200407

PR - CN20191179204 20191107

AP - CN20191179204 20191107

DT - I

CCA - [Y02E10/50](#)

CI - G08G1/095 (CN)

- H02J7/35 (CN)

- H02S20/30 (CN)

CA - Y02E10/50 (EP)

PA - MAOCHUNGEN

TI - **Solar traffic light**

AB - The invention provides a **solar traffic light**. The device comprises a stand column and a body installed on the stand column. An indicator light is arranged on the body, a first oil cylinder and a second oil cylinder are installed at the upper end of the body, oil cylinder driving shafts of the first oil cylinder and the second oil cylinder are respectively connected with a **solar** panel, and the angle between the **solar** panel and the body is adjusted through the first oil cylinder and the second oil cylinder. The **solar traffic light** is simple in overall structure, the angle of the **solar** panel is **controlled** through the two oil cylinders arranged on the body, and therefore **solar** energy can be better absorbed and converted.

13/291 © EPODOC / EPO

PN - [CN210271245U](#) U 20200407

PR - CN201921203730U 20190729

AP - CN201921203730U 20190729

DT - I

PA - CHEN YUHAO

TI - Human body induction **traffic light control** device

AB - The utility model discloses a human body induction **traffic light control** device. The **traffic light control** system comprises a **traffic light control** module (1), a **traffic light** (2), a passage countdown nixie tube (3), a human body sensor (4), a loudspeaker (5), an energy storage unit (7), a **solar** cell panel (8) and a mounting shell (9), the **traffic light control** module and the energy storage unit are arranged in the mounting shell; the **traffic light** and the passage countdown nixie tube are arranged on the outer side surface of the mounting shell; the human body sensor and the loudspeaker are arranged on the bottom surface of the mounting shell; the **solar** cell panel is arranged at the top of the mounting shell; wherein the **traffic light control** module is electrically connected with the **traffic light**, the passage countdown nixie tube, the human body sensor and the loudspeaker, the **traffic light control** module, the **traffic light**, the passage countdown nixie tube, the human body sensor and the loudspeaker are electrically connected with the energy storage unit, and the energy storage unit is electrically connected with the **solar** cell panel. According to the utility model, the red light and the green light can be automatically switched when pedestrians approach the pedestrian crosswalk.

14/291 © EPODOC / EPO

PN - [CN110956832](#) A 20200403

PR - CN201811124932 20180926
 AP - CN201811124932 20180926
 DT - I
 CI - G08G1/0955 (CN)
 PA - JIANGSU HAITONG TRAFFIC GROUP CO LTD
 TI - Temporary emergency **traffic light** for roads
 AB - The invention discloses a temporary emergency **traffic light** for roads in the technical field of traffic lights. A storage battery and a PLC **control** box are installed at the left and right ends of the top of a base, an electric telescopic rod I is hinged to the inner wall of the top of a storage groove, and two groups of nuts are symmetrically mounted on left and right outer walls of a screw. The bottom of an X-shaped support is hinged to the top of a supporting plate, traffic lights are mounted at the tops of the outer walls at the left and right sides of an electric telescopic rod II, and the top of a miniature electric telescopic rod and the top of a vertical rod are hinged to the bottoms at the left and right sides of a **solar** panel. The temporary emergency **traffic light** is high in stability and is lifted to a position 1-2cm away from the ground, and the first electric telescopic rod I on the outer wall at the periphery of the base is stretched to drive the gaskets to make close contact with the ground, so that the temporary emergency **traffic light** is effectively prevented from toppling over, the horizontal angle and the inclination angle of the **solar** panel are conveniently adjusted, the light irradiation time of the **solar** panel is prolonged, and the light energy conversion rate of the **solar** panel is increased.

15/291 © EPODOC / EPO

PN - [CN210223059U](#) U 20200331
 PR - CN201921558542U 20190918
 AP - CN201921558542U 20190918
 DT - I
 PA - HENAN HELI ELECTRIC EQUIPMENT CO LTD
 TI - Temporary **traffic light** supporting device
 AB - The utility model discloses a temporary **traffic light** supporting device. Including a support base, the supporting base comprises a supporting block. A limiting pipe sleeve is fixed to the center of the upper surface of the supporting block. A limiting clamping base is fixed to the side wall of the supporting block. A transverse supporting rod is hinged to the limiting clamping base through a hingeshaft. An adjusting stud is mounted at the end part of the transverse supporting rod; supporting foot blocks are coaxially fixed to the lower ends of the adjusting studs. An electric push rod arranged in the vertical direction is mounted on the limiting pipe sleeve; a supporting box is fixed to the end of a telescopic rod of the electric push rod, a red, green and yellow **control** indicator lamp is arranged on the side face of the supporting box, a limiting supporting sliding base is installed on the upper surface of the supporting box, a supporting frame is fixed to the upper end of the limiting supporting sliding base, and a **solar** cell panel is fixed to the supporting frame. The utility model has the beneficial effects of convenience in combination and installation, safety, stability and convenience in use.

16/291 © EPODOC / EPO

PN - [CN110942650](#) A 20200331
 PR - CN201911338464 20191223

AP - CN201911338464 20191223

DT - I

CT - || STSE (A)
[CN204102337U](#) U 20150114 [A] (SHANGQIU BODA TRANSP EQUIPMENT CO LTD)
 [A] 1-5
 * 全文 *;
[CN206802590U](#) U 20171226 [Y] (JIANGSU HAN KUANG BIOLOGICAL ENG CO LTD)
 [Y] 1-5
 * 说明书第[0015]-[0018]段、图1-图5 *;
[CN207216875U](#) U 20180410 [Y] (YANG PEIWEN, et al)
 [Y] 1-5
 * 说明书第[0013]-[0020]段、图1 *;
[CN108133607](#) A 20180608 [Y] (YAO CHAOKUN)
 [Y] 1-5
 * 说明书第[0003]-[0024]段、图1-图5 *;
[CN108428354](#) A 20180821 [Y] (YUAN JING)
 [Y] 4
 * 说明书第[0013]-[0017]段、图1-图5 *;
[CN209681439U](#) U 20191126 [Y] (QINGDAO BAOXIN MACHINERY CO LTD)
 [Y] 1-5
 * 说明书第[0017]-[0023]段、图1-图6 *

CI - F21V31/00 (CN)
 - G08G1/0955 (CN)

PA - JIANGSU YUMING GROUP CO LTD

TI - Intelligent **traffic light**

AB - The invention discloses an intelligent **traffic light** which relates to the field of intelligent traffic lights. The light comprises a movable frame body, a lamp post and a traffic signal lamp body, the movable frame body comprises a hollow rectangular shell and a pushing handle. The lamp pole comprises a main pole body and an auxiliary pole body. A strip-shaped positioning block is arranged on the bottom side of the main rod body; a circular setting groove, a strip-shaped positioning groove and an arc-shaped positioning groove are formed in the upper end of the hollow rectangular shell; a sliding block, a reset spring and an arc-shaped positioning clamping block are arranged in the arc-shaped positioning groove; an auxiliary positioning mechanism is arranged outside the main rod body and comprises a moving nut, a positioning bearing, a positioning rod, a cylindrical rotating frame and a manual frame, a dust blocking frame, a dustproof frame, a cylindrical transmission frame, a driving motor and an electric **control** lifting moving wheel mechanism are arranged in the hollow rectangular shell, and a lamp holder and a **solar** cell panel are arranged at the top end of the auxiliary rod body. According to the **traffic light**, intelligent **control** is achieved, conversion between the moving wheels and the supporting columns is achieved, detachable installation of the light pole and the light body is achieved, and efficient heat dissipation is achieved.

17/291 © EPODOC / EPO

PN - [CN210200003U](#) U 20200327

PR - CN201921607512U 20190925

AP - CN201921607512U 20190925

DT - I

PA - YEYANCHAO

- TI - **Traffic light** with alternating supply of direct current and **solar** power storage
- AB - The utility model discloses a **traffic light** with alternating supply of direct current and **solar** energy storage. The utility model relates to the technical field of traffic lights, in particular to a **traffic light** with alternating supply of direct current and **solar** energy storage, which comprises a bottom plate, the upper surface of the bottom plate is fixedly connected with a battery placing box, the middle part of the upper surface of the bottom plate is fixedly connected with a positioning plate through a fixing bolt, and the upper surface of the positioning plate is fixedly connected with a support column. The invention discloses a **traffic light** with alternating supply of direct current and **solar** power storage. The battery placement box, the **controller**, the storage battery and the solar cell panel are arranged in a matching manner; when the **traffic light** is used, after the **traffic light** with the alternating supply of the direct current and the **solar** energy storage is placed at a designated position, the storage battery can be stored by the **solar** cell panel. And when the energy of the storage battery is insufficient at night, the energy can be converted into a battery in the battery placement box through the **controller** so as to carry out direct-current power supply on the storage battery.

18/291 © EPODOC / EPO

- PN - [CN210052293U](#) U 20200211
- PR - CN201920892801U 20190614
- AP - CN201920892801U 20190614
- DT - I
- PA - YANGZHOU FAMA INTELLIGENT EQUIPMENT CO LTD
- TI - Novel traffic signal lamp
- AB - The utility model relates to the technical field of traffic lights. The utility model further discloses a novel traffic signal lamp. Treatment box, a **controller**, a **solar** inverter and a storage battery are fixedly mounted in the treatment box; a push-pull rod is movably mounted at the top of the treatment box; a fixed column is fixedly mounted at the top of the treatment box; four **traffic light** signal plates are fixedly mounted on the fixed column; the fixed column is movably sleeved with a protective cover, the bottom of the protective cover is provided with an opening, the four traffic light signal plates are all movably installed in the protective cover, the processing box is provided with a **control** device, the **control** device is matched with the protective cover and the push-pull rod, a fixed plate is fixedly installed at the top of the processing box, and storage folding plates are rotatably installed on the two sides of the fixed plate. The **traffic light** is reasonable in structure, the **solar** cell panel and the push-pull rod on the **traffic light** are convenient to store, the **traffic light** signal panel can be protected when not used, transportation and carrying are convenient, and damage to the **traffic light** is avoided.

19/291 © EPODOC / EPO

- PN - [CN209962418U](#) U 20200117
- PR - CN20192138383U 20190705
- AP - CN20192138383U 20190705
- DT - I
- CCA - [Y02E10/50](#)
- CA - Y02E10/50 (EP)
- PA - YANG SHU

- TI - Intelligent traffic signal lamp **control** device
- AB - An intelligent traffic signal lamp **control** device comprises a wind driven generator, a **solar** cell panel, a storage battery, a short message module, a voltage stabilizing circuit, a storage battery performance detection circuit and an indicator lamp detection circuit. Wherein the short message module, the voltage stabilizing circuit, the storage battery performance detection circuit and the indicator light detection circuit are integrally installed on the circuit board, the circuit board and the storage battery are installed in the lower end of a shell of the mobile **traffic light** equipment body and connected through wires, and the wind driven generator and the **solar** cell panel are installed at the upper end of the mobile **traffic light** equipment body. The storage battery is charged through wind power and **solar** power generation; an external power supply and frequent charging management of management personnel are not needed; when the performance of the storage battery is reduced or one or two, three and four indicator lights are damaged, a short message can be sent to a mobile phone of a manager through the short message module, the manager can carry out maintenance in time, unmanned management can be achieved, convenience is brought to the manager, and the traffic dispersion effect can be effectively achieved.

20/291 © EPODOC / EPO

- PN - [CN110728852](#) A 20200124
- PR - CN20191179067 20191107
- AP - CN20191179067 20191107
- DT - I
- CI - G06K9/00288 (CN)
- G08G1/0175 (CN)
- G08G1/095 (CN)
- H02J7/35 (CN)
- PA - CHENDINGLIANG
- TI - **Solar traffic light**
- AB - The invention provides a **solar traffic light**. The **solar traffic light** comprises a stand column and a body installed on the stand column, wherein an indicator light is arranged on the body; a first oil cylinder and a second oil cylinder are installed at the upper end of the body; oil cylinder driving shafts of the first oil cylinder and the second oil cylinder are connected with **solar** panels respectively; and the angle between each **solar** panel and the body is adjusted through the first oil cylinder and the second oil cylinder. The **solar traffic light** is simple in overall structure, the angle between each **solar** panel is **controlled** through the two oil cylinders arranged on the body, and therefore **solar** energy can be better absorbed and converted.

21/291 © EPODOC / EPO

- PN - [CN209912141U](#) U 20200107
- PR - CN201921103922U 20190715
- AP - CN201921103922U 20190715
- DT - I
- PA - MAO JIANMIN
- TI - Intelligent diversion vehicle
- AB - The utility model discloses an intelligent flow guide vehicle. Moving seat, a **control** mechanism is arranged in the moving seat; the **control** mechanism comprises a storage battery fixedly connected to the inner bottom of the moving seat; a single-

chip microcomputer is fixedly connected to the inner side wall of the moving seat; the storage battery is electrically connected with the single chip microcomputer; the storage battery is electrically connected with the indicating mechanism and the cleaning mechanism. Wherein the moving seat is connected with a pushing mechanism, the upper end of the moving seat is connected with an indication mechanism, the upper end of the indication mechanism is connected with a protection mechanism, a cleaning mechanism is arranged in the protection mechanism, and the **control** mechanism is electrically connected with the indication mechanism and the cleaning mechanism. According to the utility model, dust and foreign matters on the **solar** cell panel can be automatically cleaned, the **solar** cell panel can be further normally used, the device can detect whether the **traffic light** is damaged or not, the maintenance of workers is facilitated, and the traffic disorder caused by the fault of the **traffic light** is avoided.

22/291 © EPODOC / EPO

- PN - [CN209879737U](#) U 20191231
- PR - CN20192118387U 20190702
- AP - CN20192118387U 20190702
- DT - I
- PA - YECHUANLIN
- TI - Traffic intersection intelligent dispersion device
- AB - The utility model relates to the field of road traffic. The utility model particularly relates to a traffic intersection intelligent dispersion device. The device comprises a base, a **controller**, a **control** switch, an indicating lamp and a camera, the **controller** and the **control** switch are arranged in an inner cavity of the second box body; a motor is arranged in an inner cavity of the base; a movable frame is fixedly arranged at the upper end of the base; a threaded shaft is longitudinally arranged in an inner cavity of the movable frame. The outer side of the movable frame is movably sleeved with a mounting frame; the indicator lights are arranged around the mounting frame; threaded rods are arranged at the upper ends of the mounting frames; a **solar** panel is arranged at the top of the threaded rod; a mounting plate movably penetrates through the outer side of the threaded rod; the cameras are fixedly arranged on the periphery of the outer side of the mounting plate; according to the utility model, the height of the indicating lamp is adjusted, the real condition of the indicating lamp can be seen in real time by traffic flow or people flow at a traffic intersection, the **controller controls** the **traffic light** to change colors correspondingly according to information detected by the camera, and the purpose of intelligent dispersion according to actual conditions is achieved.

23/291 © EPODOC / EPO

- PN - [CN110619755](#) A 20191227
- PR - CN201810632721 20180620
- AP - CN201810632721 20180620
- DT - I
- CI - G08G1/095 (CN)
- G08G1/096 (CN)
- H02J7/35 (CN)
- PA - CHENCHUNBANG
- TI - Intelligent **traffic light** for crossroad with special left-turn lanes

AB - The invention relates to an intelligent **traffic light** for crossroad with special left-turn lanes. The intelligent **traffic light** comprises **solar** devices, red-green double-color straight-going signal command lights, red-green double-color left-going signal command lights, regional cameras, red-green double-color second-reading display screens and central processing unit devices. Images with cars or objects and blank images free of the cars or objects, shot by the regional cameras in waiting lane regions are transmitted to the central processors in a WIFI mode, and are converted into digital signals, and digital instruction electronic switches **control** the **traffic light** to work, so that the **traffic light** can cross programs to rush to lanes for driving and jump seconds to accelerate ending of the driving program, thereby the intelligent effect of the **traffic light** is achieved.

24/291 © EPODOC / EPO

PN - [CN209842875U](#) U 20191224

PR - CN201920978801U 20190627

AP - CN201920978801U 20190627

DT - I

PA - UNIVNANJING FORESTRY

TI - Multifunctional **traffic light** convenient to overhaul

AB - The utility model discloses a multifunctional **traffic light** convenient for maintenance. The **solar traffic light** comprises a vertical supporting assembly, a transverse supporting assembly, a **control** box arranged on the vertical supporting assembly and used for **controlling** operation, a **traffic light** assembly arranged on the transverse supporting assembly and used for displaying signals, and a solar ceiling assembly arranged on the transverse supporting assembly and located above the **traffic light** assembly. The transverse supporting assembly is connected with the vertical supporting assembly through a first connecting rod. Wherein the first connecting rod is vertically arranged along the vertical supporting assembly in a lifting mode, the transverse supporting assembly is horizontally arranged along the first connecting rod in a horizontal rotating mode, the **solar** ceiling assembly is used for supplying power to the **traffic light** assembly and shading sun and rain, and a plurality of **control** switches are arranged in the **control** box. When the **traffic light** is overhauled, high-altitude operation is not needed, safety risks are reduced, the **traffic light** is descended to the ground and then rotated to the side edge of a road to be overhauled, the road congestion time is shortened, and the personal safety of overhauling personnel is improved.

25/291 © EPODOC / EPO

PN - [CN209765740U](#) U 20191210

PR - CN201920520337U 20190417

AP - CN201920520337U 20190417

DT - I

PA - SHENZHEN CHANGHE TRAFFIC ENG CO LTD

TI - Movable municipal **traffic light**

AB - The utility model discloses a movable municipal **traffic light**. The **traffic light** comprises a **traffic light** body base and a battery box, moving mechanisms are movably installed on the two sides of the bottom of the base. A storage battery is fixedly mounted in the battery box; a spring is fixedly mounted on the outer side of the battery box; a protective plate is movably installed at one end of each spring, an adjusting mechanism is movably installed at the top of the battery box, a **traffic light**

body is fixedly installed at the top of the adjusting mechanism, a top cover is fixedly installed at the top of the **traffic light** body, a **solar** cell panel is fixedly installed on the surface of the top cover, and a loudspeaker is fixedly installed on one side of the **traffic light** body. And a **controller** is fixedly mounted on one side of the **traffic light** body at the bottom of the loudspeaker. Through the arrangement of the **controller**, the moving mechanism, the protection plate and the spring, the problems that a traditional municipal **traffic light** cannot be moved, use is inconvenient, no protection measure exists, and damage is prone to occurring in the collision process are solved.

26/291 © EPODOC / EPO

PN - [CN110556008](#) A 20191210
 PR - CN201810550057 20180531
 AP - CN201810550057 20180531
 DT - I
 CI - G08G1/07 (CN)
 - G08G1/095 (CN)
 PA - CHENCHUNBANG
 TI - T-junction intelligent **traffic light**
 AB - The invention relates to a T-junction intelligent **traffic light**. The T-junction intelligent **traffic light** comprises a **solar** device, a storage battery, a red-green double-color straight-going signal command lamp, a red-green double-color left-turn signal command lamp, a camera, a red-green double-color second-reading display and a central processing unit device, a camera is used for capturing a static image of a waiting automobile, after being transmitted to the central processor device, the static image is converted into a digital signal, and a digital instruction electronic switch **controls** the **traffic light** to work, thereby realizing the intelligent **traffic light**, achieving the real-time and flexible response of the **traffic light**, and striving for more precious time for the vehicle owners to drive the vehicles safely.

27/291 © EPODOC / EPO

PN - [CN110517517](#) A 20191129
 PR - CN201910816499 20190830
 AP - CN201910816499 20190830
 DT - I
 CI - G08C17/02 (CN)
 - G08G1/095 (CN)
 - H02J7/35 (CN)
 - H04B1/40 (CN)
 PA - SHAANXI KAIHUA JIAMEI CONSTRUCTION ENG CO LTD
 TI - **Solar** LED ground **traffic light** and **control** method thereof
 AB - The invention discloses a **solar** LED ground **traffic light** and a **control** method thereof. The **solar** LED ground **traffic light** comprises a rear cover plate which is fixed at two ends of a pavement marking; an LED luminescent tube is mounted at the edge of the rear cover plate; a power **control** plate connected with a lithium battery is mounted at the middle part of the rear cover plate; the lithium battery is connected with each of a **solar** panel and a single chip circuit LED drive; and the LED luminescent tube is connected with the single chip circuit LED drive. The **solar** LED ground **traffic light** is capable of strengthening the pavement markers and markings so as to have

significance for playing stronger warning and guiding roles for each traffic participator and guiding the safe and civilized travel, and is capable of playing an important role in beautifying the urban traffic networks and enhancing the night quality image. The **control** method of the **solar** LED ground **traffic light** is capable of **controlling** the electric quantity of the guiding lights so as to ensure that the guiding lights can keep the working state for a long time while intercommunicating with the outside world.

28/291 © EPODOC / EPO

PN - [CN209691096U](#) U 20191126
 PR - CN201920822048U 20190531
 AP - CN201920822048U 20190531
 DT - I
 PA - XIAN TRAFFIC ENGINEERING INST
 TI - Traffic signal lamp capable of automatically adjusting duration
 AB - The utility model discloses a traffic signal lamp capable of automatically adjusting duration. Weight box, a storage battery is arranged in the weight box; a base is fixedly mounted on the upper surface of the weight box; a supporting column is installed in the middle of the upper surface of the base, the left side and the right side of the supporting column are connected with obliquely-arranged **solar** panels through connecting bases, a square stand column is fixedly installed at the upper end of the supporting column, and signal lamps are installed on the four side walls of the square stand column. According to the utility model, the **controller controls** the telescoping of the output end of the electric push rod, thereby achieving the proper adjustment of the photographing angle of the congestion photographing analyzer. Therefore, even if a large row of vehicles are jammed, the jam recording analyzer can record the tail end of the jammed vehicle, it is ensured that the jam recording analyzer can help the signal lamp to make the most suitable **traffic light** duration distribution, and the crossroad jam condition of a construction road is solved at the highest speed.

29/291 © EPODOC / EPO

PN - [CN209691104U](#) U 20191126
 PR - CN201920831403U 20190603
 AP - CN201920831403U 20190603
 DT - I
 CCA - [Y02B10/30](#) ; [Y02E10/50](#) ; [Y02E10/72](#) ; [Y02E10/728](#)
 CA - Y02B10/30 (EP)
 - Y02E10/50 (EP)
 - Y02E10/72 (EP)
 - Y02E10/728 (EP)
 PA - JIANGXI QIANSHI INTELLIGENT TECH RESEARCH AND DEVELOPMENT CO LTD
 TI - Intelligent **solar traffic light**
 AB - The utility model discloses an intelligent **solar traffic light** which comprises a base, a vertical rod, a cross arm, a photovoltaic power generation panel, a generator, a fan, a radar, a display, a **traffic light** module, a photosensitive ball, a microcontroller, an electric motor and a storage battery. The vertical rod is vertically arranged, the bottom of the vertical rod is fixed to the top of the base, the cross arm is horizontally arranged, the left end of the cross arm is fixed to the upper end of the vertical rod,

the **traffic light** module is fixed to the right end of the cross arm, and the photovoltaic power generation panel is obliquely arranged. Through the fan and the photovoltaic power generation panel arranged on the **traffic light**, power generation of wind power and sunlight can be realized; an electric motor is further arranged below the photovoltaic power generation panel. The illumination direction of sunlight can be detected through the photosensitive ball, the microprocessor can **control** the starting of the electric motor according to the detected illumination direction of the sunlight so as to **control** the orientation rotation of the photovoltaic power generation panel, so that the photovoltaic power generation panel is aligned with the illumination direction of the sun, the best power generation effect is achieved, and the use efficiency of resources is improved.

30/291 © EPODOC / EPO

PN - [CN209641079U](#) U 20191115
 PR - CN201920175387U 20190131
 AP - CN201920175387U 20190131
 DT - I
 PA - SHANGHAI SONGHONG INTELLIGENT AUTOMOBILE TECH CO LTD
 TI - Lifting type **traffic light** device
 AB - The utility model relates to a lifting type **traffic light** device. The **traffic light** comprises a base (1), universal wheels (2), a light holder (3), an LED **traffic light** (4), a lifting mechanism (6), a solar power supply mechanism (7) and a remote **control** terminal. Wherein the universal wheels (2) are arranged at the bottom of the base (1); wherein the lamp bracket (3) is arranged in the center of the base (1); the lifting mechanism (6) is arranged on the outer wall of the lamp bracket (3); wherein the LED **traffic light** (4) is connected with the lifting mechanism (6), the lifting mechanism (6) is in wireless connection with the remote **control** terminal, the **solar** power supply mechanism (7) is arranged at the top of the light holder (3), and the air cylinder **control** module is connected with the remote **control** terminal (8) through the wireless communication module. Compared with the prior art, the utility model has the advantages of intelligent operation, simple structure, cost saving and the like.

31/291 © EPODOC / EPO

PN - [CN209514879U](#) U 20191018
 PR - CN201920433935U 20190402
 AP - CN201920433935U 20190402
 DT - I
 PA - EMPERYLAND SMART ENERGY ZHEJIANG CO LTD
 TI - Commercial power intelligent **traffic light**
 AB - The utility model discloses a commercial power intelligent **traffic light**. Supporting column, a short-range **traffic light** is arranged at the top of the supporting column; an indication change light bar is arranged on one side of the bottom of the supporting column; a **control** panel is arranged on one side of the supporting column; a **control** button matched with the **control** panel is arranged on one side, away from the supporting column, of the **control** panel; a connecting **control** box matched with the supporting column is arranged at the top of the supporting column; a power box is arranged in the connection **control** box; a protective glass cover is arranged at the top end of the connecting **control** box; **solar** panels matched with the arms of the protective glass cover are symmetrically arranged on the arms of the protective glass cover, light energy transmission rods are arranged on the sides, away from the

protective glass cover, of the **solar** panels, conversion boxes matched with the light energy transmission rods are arranged at the ends, away from the **solar** panels, of the light energy transmission rods, and connecting rods matched with the power box are arranged at the bottom ends of the conversion boxes. The intelligent **traffic light** has the advantages that it is effectively guaranteed that the intelligent **traffic light** can remind people in a more conspicuous mode according to signals of the **traffic light**, and then the intelligent **traffic light** is more convenient to use.

32/291 © EPODOC / EPO

PN - [WO2019171101](#) A2 20190912

PNFP - WO2019171101 A3 20200102

PR - RU20170143214 20171211

AP - WO2018IB01631 20181210

DT - *; Rep

CT - |RU| ISR (A3)

[US2017183832](#) A1 20170629 [X] (MORAN MICHAEL T [IE], et al)
[X] 1

* , fig. 1, the claims *;

[US2006193691](#) A1 20060831 [X] (GONZALEZ ALEJANDRO B [US], et al)
[X] 2

* [0016] -[0019], the claims, fig. 3 *;

[US2013113618](#) A1 20130509 [A] (FLANAGAN JESSICA M [AU], et al)
[A] 1-2;

[US7018131](#) B2 20060328 [A] (JORDAN WESLEY B [US])
[A] 1-2

CTNP - |RU| ISR (A3)

[A] - SIMDYANKIN A. A. et al., "Bessputnikovaya sistema navigatsii dlya agropromyshlennogo kompleksa", Tekhnicheskie nauki. Niva Povolzhya, (20170000), vol. 43, no. 2, pages 91 - 98
[A] 1-2

CCI - [E01F9/559](#) ; [G08G1/095](#)

CI - E01F9/559 (EP)

- E01F11/00 (RU)

- G08G1/07 (RU)

- G08G1/09 (RU)

- G08G1/095 (EP)

PA - (A2 A3)

TOSHMATOV RAVSHAN NEMATOVICH [TJ]

TI - (A2 A3)

CONTROLLABLE DIFFERENTIATED ROAD MARKER AND METHOD OF REGULATING TRAFFIC

AB - (A2)

The invention relates to the field of regulating the flow of automobile traffic and is intended for indicating the direction and the limits of the flow of a traffic lane. The technical problem addressed by the invention is that of enabling vehicle drivers to receive information directly from the road surface, thus making it easier for drivers to distinguish a **traffic light** signal and the direction of travel with respect to each specific lane. The technical result is achieved in that a **controllable** road marker that is set into the surface of a road comprises a housing, in the lower part of which are fastened a battery, a **control** unit, and a geolocation beacon, and the upper part of

the housing is in the form of a **solar** panel and two, three, or four light sources having lenses for refracting rays of light, wherein each light source is in the form of sources of light in the red, green, and yellow emission spectrum. A method of regulating traffic consists in installing **controllable** differentiated road markers on automobile traffic lanes, and **controlling** said markers from a traffic **control** center via an encrypted communications channel, or in a chain, when one marker receives communications and transmits it to the next, or from a specialized automobile having **control** equipment on board.

- (A3)

The invention relates to the field of regulating traffic. The present **controllable** differentiated road marker consists of a housing, in the lower part of which are fastened batteries, a **control** unit, and a geolocation beacon. The upper part of the housing is in the form of a **solar** cell and with multiple light sources with lenses for refracting beams of light. Each light source is in the form of sources of light in the red, green and yellow emission spectrum. A method of regulating traffic consists in installing **controllable** differentiated road markers on road traffic lanes along the line of a traffic lane; at junctions, installing them at points where central lane lines cross; and, on roads with reversible traffic flow, installing a **controllable** road marker from the first intersection to the last. Said markers are **controlled** from a traffic **control** centre. This allows information to be acquired directly from a roadway surface.

33/291 © EPODOC / EPO

PN - [CN209281629U](#) U 20190820

PR - CN201821145765U 20180719

AP - CN201821145765U 20180719

DT - I

PA - ZHANGHONGFEI

TI - Intelligent traffic signal lamp

AB - The utility model discloses an intelligent traffic signal lamp. The utility model belongs to the field of traffic signal lamp **control**, the utility model designs an intelligent traffic signal lamp. The traffic light comprises a supporting rod, a transverse rod, a **traffic light** frame and a lifting device. The supporting rod is fixedly connected with the red light running camera; the supporting rod is fixedly connected with the **solar** inclined plate; the supporting rod is fixedly connected with the **control** box; the supporting rod is fixedly connected with the storage battery; a button is arranged on the supporting rod; the supporting rod is fixedly connected with the connecting block; the connecting block is fixedly connected with the lifting device; a rain baffle is arranged on the lifting device; the lifting device is movably connected with the cross rod; a voice broadcast sound box is arranged in front of the cross rod; the voice broadcast sound box is fixedly connected with the shielding cover A. The countdown display is fixedly connected with the shielding cover B. The countdown display is fixedly connected with the shielding cover B. The cross rod is fixedly connected with the **traffic light** frame. The **traffic light** is fixedly connected in front of the **traffic light** frame, so that warning can be given out when a red light or a green light is about to be emitted, and voice reminding is achieved when the visual effect is poor.

34/291 © EPODOC / EPO

PN - [CN209232146U](#) U 20190809

PR - CN201821571928U 20180926

AP - CN201821571928U 20180926

DT - I

PA - JIANGSU HAI TONG TRAFFIC GROUP CO LTD

TI - Temporary emergency **traffic light** for road

AB - The utility model discloses a temporary emergency **traffic light** for roads in the technical field of traffic lights. A storage battery and a PLC **control** box are installed at the left and right ends of the top of the base. An electric telescopic rod I is hinged to the inner wall of the top of the storage groove; two groups of nuts are symmetrically mounted on left and right outer walls of the screw; the bottom of the X-shaped support is hinged to the top of the supporting plate. Traffic lights are mounted at the tops of the outer walls of the left and right sides of the electric telescopic rod II; the top of the miniature electric telescopic rod and the top of the vertical rod are hinged to the bottoms of the left and right sides of the **solar** panel. The device is high in stability, the device is lifted to a position 1-2cm away from the ground; the first electric telescopic rods on the outer wall of the periphery of the base are stretched to drive the gaskets to make close contact with the ground, the device is effectively prevented from toppling over, the horizontal angle and the inclination angle of the **solar** panel are conveniently adjusted, the light irradiation time of the **solar** panel is prolonged, and the light energy conversion rate of the **solar** panel is increased.

35/291 © EPODOC / EPO

PN - [CN209216291U](#) U 20190806

PR - CN201920117768U 20190123

AP - CN201920117768U 20190123

DT - I

PA - SICHUAN VOCATIONAL & TECHNICAL COLLEGE COMM

TI - Intelligent traffic signal lamp **control** box

AB - The utility model provides an intelligent traffic signal lamp **control** box, which comprises a box body, a microcontroller, a vehicle speed measurement **controller** connected with the microcontroller, an inverter and a signal lamp circuit are arranged in the box body, the inverter is also connected with a **solar** panel, and the microcontroller is connected with a display terminal through a wireless communication unit. By means of the design, the problem of potential safety hazards caused by too high vehicle speed when a vehicle passes through a **traffic light** intersection on the premise that the traffic flow of a country road is small, many obstacles exist beside the country road and the visual field is not good is solved. The device is simple in structure and reasonable in design, and has very high popularization and application values.

36/291 © EPODOC / EPO

PN - [CN110097769](#) A 20190806

PR - CN201910330583 20190423

AP - CN201910330583 20190423

DT - I

CCA - [Y02E10/50](#)

CI - G08G1/095 (CN)
- H02S30/20 (CN)

CA - Y02E10/50 (EP)

PA - YANGZHOU LIWEI LIGHTING ELECTRIC APPLIANCE CO LTD

TI - **Solar traffic light** capable of sustainably illuminating at night

AB - The invention discloses a **solar traffic light** capable of sustainably illuminating at night. The **solar traffic light** comprises a pillar, wherein the upper end of the pillar is fixedly provided with a vertical rod, the upper end of the vertical rod is fixedly provided with a transversely-arranged supporting arm, the supporting arm is sequentially provided with a plurality of sets of signal lamps, a bearing pedestal is mounted on the upper surface of the supporting arm, a bearing is arranged in the bearing pedestal, a rotating rod is inserted in and rotatably connected with the bearing, the rotating rod is fixedly sleeved with a bottom plate, the bottom plate is fixedly provided with a **solar** photovoltaic panel, the supporting arm is provided with a driving mechanism matched with the rotating rod, and one side, away from the supporting arm, of the vertical rod is sequentially provided with a storage battery and a **controller** from top to bottom. The sustainably normal operation of the solar traffic light is ensured through adjusting states of the **solar** photovoltaic panel timely by means of the driving mechanism, thereby avoiding the economic loss of the local traffic department in charge.

37/291 © EPODOC / EPO

PN - [CN209199330U](#) U 20190802

PR - CN20182261013U 20181207

AP - CN20182261013U 20181207

DT - I

PA - JIANGSU SHIYIYUAN TRANSP ENGINEERING CO LTD

TI - **Traffic light** with intelligent pedestrian passing warning device

AB - The utility model discloses a **traffic light** with an intelligent pedestrian passing warning device. Vertical rod, a box body is arranged at the bottom end of the vertical rod; a range finder is arranged in the middle of the box body; glass is arranged in the middle of the back of the box body; a lamp frame is arranged at the top end of the vertical rod; a red lamp, a yellow lamp and a green lamp are arranged in the lamp frame, an installation plate is arranged at the upper end of the lamp frame, an installation box is arranged at the lower left end of the installation plate, a yellow flashlight and a blue flashlight are arranged in the installation box, a loudspeaker and a camera are arranged at the lower right end of the installation plate, and **solar** panels are installed at the upper end of the installation plate in a bilateral symmetry mode. By arranging the range finder, the storage battery, the MPPT charging conversion device, the loudspeaker, the camera, the **solar** panel, the yellow flash lamp, the blue flash lamp, the **control** panel and the signal processor, the problems that installation steps are tedious and the warning effect of the **traffic light** is poor due to the fact that the **traffic light** needs to be powered on by laying cables are solved.

38/291 © EPODOC / EPO

PN - [CN110033628](#) A 20190719

PR - CN201910398232 20190514

AP - CN201910398232 20190514

DT - I

CI - G08G1/087 (CN)
- G08G1/095 (CN)

- G08G1/096 (CN)

PA - SHAANXI ZHIDUODA INTELLIGENT TECH CO LTD

TI - Artificial intelligence multifunctional traffic command robot

AB - The invention discloses an artificial intelligence multifunctional traffic command robot. The artificial intelligence multifunctional traffic command robot comprises a fixed base; the fixed base is fixedly installed at the central position of a crossroad; a cuboid fixed station is arranged on the upper surface of the fixed base; the four side surfaces of the cuboid fixed station are respectively provided with a **traffic light** indicating mechanism; a special vehicle detecting mechanism is arranged on the fixed base, and a special vehicle indicating mechanism is arranged on the fixed base; and lane indicating mechanisms are arranged on four side surfaces of the cuboid fixed station. The robot is connected with a complaint mechanism; the fixed base is provided with a tilted **solar** power generation panel on one side, a **controller** is arranged on one side of the upper surface of the fixed base, and a timing system is arranged in the **controller**. The artificial intelligence multifunctional traffic command robot provided by the invention has the beneficial effects that the structure is simple and the practicability is strong.

39/291 © EPODOC / EPO

PN - [CN109949592](#) A 20190628

PR - CN201910389242 20190510

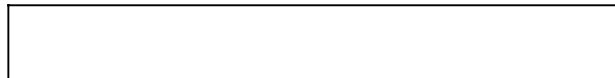
AP - CN201910389242 20190510

DT - I

PA - UNIV ANHUI SCI & TECHNOLOGY

TI - Mobile multi-directional telescopic **traffic** signal **light** frame

AB - The invention discloses a mobile multi-directional telescopic **traffic** signal **light** frame. The mobile multi-directional telescopic **traffic** signal **light** frame comprises a base, a lamp pole, lamp arms, ahydraulic lifting oil cylinder, a rotary switch, a support frame, a connecting body, a **solar** cell panel and signal lamp sets, wherein the base is a mobile base, and the upper part of the base is riveted and fixed with the signal lamp pole; the whole signal lamp pole is divided into an upper part and a lower part which are connected with each other, the lower part is fixed, the upper part can stretch and retract through the hydraulic



lifting oil cylinder, and the telescopic distance is **controlled** through the rotary switch. Projection lamps for indicating the safety range are arranged in front of the lamp sets, four signal lamp arms are arranged, one side of each signal lamp arm is connected with the upper lamp pole through the connecting body, one side of each signal lamp arm is connected with the corresponding signal lamp set, each lamp arm is divided into two parts, can rotate vertically through a rotating shaft and can stretch and retract through sliding riveting, and when the lamp arms stretch out, the rotary support frame with the lower part connected to the lamp pole is used to maintain the stability of the lamp arms. The **solar** cell panel is arranged at the top end of the lamp pole to perform **solar** power generation, and a conversion device supplies power to the signal lamp sets.

40/291 © EPODOC / EPO

PN - [CN109872551](#) A 20190611

PR - CN201910282410 20190409

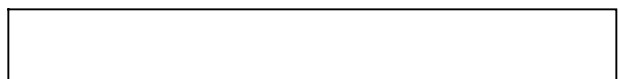
AP - CN201910282410 20190409

DT - I

PA - DONG XIANGMEI

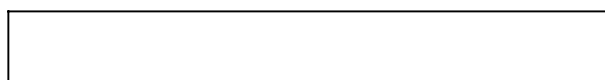
TI - Movable **traffic light** device based on photovoltaic power generation

AB - The invention discloses a movable **traffic light** device based on photovoltaic power generation. The device comprises a base; a **solar** photovoltaic power generation device which is obliquely placed is arranged on one side surface of the base; a plurality of universal



wheels are arranged on the lower surface of the base; a climbing mechanism is arranged on the base; a fixing mechanism is arranged below the climbing mechanism; a moving mechanism is arranged on the base; a starting mechanism is arranged on the base; a **controller** is arranged on one side of the upper surface of the base; and the **controller** is externally connected with a remote **controller**. According to the movable **traffic light** device, a **solar** photovoltaic power generation device generates power and provides the power for the movable **traffic light** device; the movable **traffic light** device can be moved from the ground to the upper end of a **traffic light** at an intersection through the climbing mechanism; the movable traffic light device is fixed through the fixing mechanism in a climbing process; the **traffic light** is moved to the position above the middle of a road through the moving mechanism; and the **traffic light** is started by the starting mechanism in a moving process. The movable **traffic light** device has the beneficial effects of being simple in structure and high in practicability.

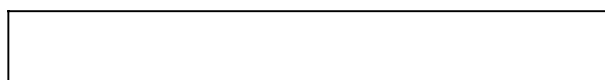
41/291 © EPODOC / EPO
 PN - [CN109872550](#) A 20190611
 PR - CN201711255672 20171202
 AP - CN201711255672 20171202
 DT - I
 PA - XIAN KAIYUAN HEZHONG
 ELECTROMECHANICAL CO LTD
 TI - **Solar** mobile lifting **traffic light**
 AB - The invention belongs to the
 field of environmental



protection technology and discloses a **solar** mobile lifting **traffic light**. The **solar** mobile lifting **traffic light** comprises a **solar** cell panel, an LED light, a lifting upright rod, a push rod, a base box, a roller, a lifting cavity, a rocker, a detector, a rotating motor, a model plate, a screw rod, a **controller**, a storage battery, a limit block and a gear, the lifting upright rod is fixed on the base box, the lifting upright rod is arranged in the lifting cavity, the **solar** cell panel is arranged at the upper end of the lifting upright rod, the **solar** cell panel is connected with the LED light by virtue of a wire, the roller is arranged at the lower end of the base box, and the push rod is arranged on the base box. The height of the **solar** mobile lifting **traffic light** disclosed by the invention can be freely adjusted, the **solar** mobile lifting **traffic light** is easy to move, simple to use, energy-saving and environmentally friendly, whether the **solar** mobile lifting **traffic light** can be overloaded also can be detected by using the detector, power is stored by virtue of **solar** energy, and power is supplied to the **traffic light** after powerfailure of the **traffic light**, so that the **traffic light** can continue to work, and traffic police can better go to the site and maintain traffic order.

42/291 © EPODOC / EPO

PN - [CN109841076](#) A 20190604
 PR - CN201711231438 20171129
 AP - CN201711231438 20171129
 DT - I



- PA - ZHANG LEI
- TI - Portable energy-saving **traffic light** with photographing function
- AB - The invention relates to a portable energy-saving **traffic light** with a photographing function, which comprises a **solar** panel and a main **controller**, and is characterized in that one end of the **solar** panel is connected with a fixing platform, the **solar** panel is provided with a fixing rod, the fixing platform is provided with a plurality of connecting holes, traffic lights are arranged below the fixing platform, the lower end of the traffic lights is provided with a longitudinal connecting rod, the longitudinal connecting rod is connected with a horizontal connecting rod, one end of the horizontal connecting rod is provided with a snapshotting device, the lower end of the longitudinal connecting rod is provided with a fixing bolt, the longitudinal connecting rod is sleeved with a plastic tube, the plastic tube is provided with fixing holes, the lower end of the plastic tube is connected with the main **controller**, the main **controller** is provided with a bottom support, and the lower end of the bottom support is provided with sliding wheels. The **traffic light** has the beneficial effects that the new energy is utilized, the utilization of energy is saved, and meanwhile, the **traffic light** is inconvenient to carry and handle and has very good market application prospects.

PN	- CN208954343U U 20190607	
PR	- CN201821517005U 20180917	
AP	- CN201821517005U 20180917	
DT	- I	
PA	- SHENZHEN CHANGHE TRAFFIC ENG CO LTD	
TI	- Solar mobile traffic light	
AB	The utility model relates to the field of traffic. The solar mobile traffic light comprises a light body, bottom frame, a partition plate is arranged in the bottom frame; electric telescopic rods are arranged on the left and right sides of the top of the inner cavity of the bottom frame; the lower ends of the electric telescopic rods penetrate through the partition; the bottom of the electric telescopic rod is connected with a fixed plate; rollers are arranged at left and right ends of the bottom of the fixed plate; a controller, a first motor and a storage battery are sequentially arranged at the top of the partition plate from left to right, an output shaft of the first motor penetrates through the top of the bottom frame, and a barrel is arranged at the top of the first motor. The movable traffic light is novel in design and convenient to use, the movable traffic light can be stably fixed, and the risk that the movable traffic light slides after being fixed is reduced; besides, the solar power generation panel at the top of the movable traffic light can be automatically cleaned, the photoelectric conversion efficiency of the solar power generation panel is indirectly improved, and the cruising ability of the movable traffic light is improved.	

44/291 © EPODOC / EPO

PN - [CN109817003](#) A 20190528

PR - CN201910259772 20190402

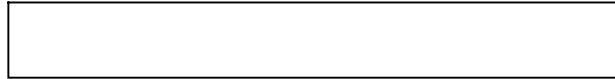
AP - CN201910259772 20190402

DT - I

PA - EMPEYLANDSMARTENERGY
ZHEJIANG CO LTD

TI - Electric supply smart **traffic light**

AB - The invention discloses an electric supply smart **traffic light** which comprises a supporting column. A short-range traffic lamp is arranged at the top of the supporting column. An indication change lamp bar is arranged at one side of the bottom of the supporting column, a **control** board is arranged at one side of the supporting column, a **control** button matched with the **control** board is arranged at the side, away from the supporting column, of the **control** board, a connection **control** box matched with the supporting column is arranged at the top of the supporting column, a power box is arranged inside the connection **control** box, a protective glass cover is arranged at the top end of the connection **control** box, the arm of the protective glass cover is symmetrically provided with a **solar** cell panel matched with the protective glass cover, a light energy transmission rod is arranged at the side, away from of the protective glass cover, of the **solar** cell panel, a conversion box matched with the light energy transmission rod is arranged at the end, away from the **solar** cell panel, of the light energy transmission rod, and the bottom end of the conversion box is provided



with a connecting rod matched with a power box. The **traffic light** has the advantages that it is effectively ensured that the **traffic light** can send signals of the **traffic light** to remind people in a more clear-cut mode, and the **traffic light** can be more convenient to use.

45/291 © EPODOC / EPO

PN - [CN208889018U](#) U 20190521

PR - CN201821316306U 20180815

AP - CN201821316306U 20180815

DT - I

PA - JIANGSU TAINING
CONSTRUCTION ENGINEERING
TECH CO LTD

TI - Disclosed is a novel red light running automatic recording system

AB - The utility model discloses a novel red light running automatic recording system which comprises a base part and a stand column part. The base part comprises a base, a **control** host and a storage battery which are arranged in the base, universal wheels arranged on the lower end face of the base, and a vehicle monitoring device detachably installed on the upper end face of the base. The stand column part comprises a stand column vertically arranged on the base. wherein the **solar** cell panel is arranged at the top end of the stand column, one ends of the two gas springs are hinged to the **solar** cell panel, the other ends of the two gas springs are hinged to the stand column, and the four storage cavities are formed in the stand column and arranged in a central symmetry mode. A **traffic light** is arranged at



the opening end of the inner side of each storage cavity; The recording system further comprises a camera shooting mechanism arranged on the stand column. Through the design, the temporary use of the recording system is facilitated, and the protection of the camera and the **traffic light** is enhanced.

46/291 © EPODOC / EPO

PN - [CN208848371U](#) U 20190510
 PR - CN201821643287U 20181010
 AP - CN201821643287U 20181010
 DT - I
 PA - GUO JIAXIN
 TI - **Traffic light** detector
 AB - The utility model discloses a **traffic light** detector. The device comprises a body and a **control** detection system, a color sensor is fixedly mounted at the front end part of an inner cavity of the machine body; a **solar** panel is fixedly mounted on the front surface of the machine body; an electronic display screen is fixedly mounted on the back surface of the machine body; a loudspeaker is further installed on the back face of the machine body, a battery panel is fixedly installed at the rear end of an inner cavity of the machine body, a charging port is formed in the bottom of the battery panel, the charging port is exposed out of the machine body, the **control** detection system comprises an information detection module, and the information detection module comprises a color sensor and a light sensor. According to the **traffic light** detector, the red and green signal light auxiliary recognition device



is arranged, so that red and green blind patients can be helped to accurately recognize red and green, the red and green blind patients can safely drive motor vehicles, the life quality of the crowd is improved, and traffic accidents are greatly reduced.

47/291 © EPODOC / EPO

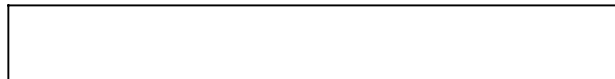
PN - [CN109727467](#) A 20190507
 PR - CN20171141556 20171030
 AP - CN20171141556 20171030
 DT - I
 PA - YANGZHOU TAIJI IND CO LTD
 TI - **Traffic** signal **light** convenient for fixation
 AB - The invention discloses a **traffic** signal **light** convenient for fixation. The **traffic** signal **light** comprises a box body. A battery is arranged in the inner cavity of the box body. A partition plate is arranged on the top end of the battery. An electric telescopic rod 1 is arranged on the top end of the partition plate. The top end of the electric telescopic rod 1 is connected with a signal light. Asolar panel is arranged on the top end of the signal light. The **solar** panel is electrically connected with the battery through a photovoltaic inverter and a transformer. Installation boxes are arranged on two sides of the box body. An electric telescopic rod 2 is arranged in the inner cavity of each installation box. The power output end of each electric telescopic rod 2 is connected with a tapered insert through an installation box. Support columns are arranged on the bottom end of the box body. A universal wheel is arranged



on the bottom end of each support column. A **control** switch is arranged on the box body. The **control** switch is electrically connected with the electric telescopic rod 1, an electric telescopic rod 3, the electric telescopic rods 2, the signal light and the battery. The traffic signal light convenient for fixation can be conveniently fixed according to different terrains.

48/291 © EPODOC / EPO

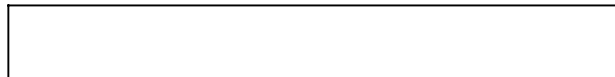
PN - [CN109697872](#) A 20190430
 PR - CN201910101159 20190131
 AP - CN201910101159 20190131
 DT - I
 CI - G01S19/07 (CN)
 - G01S19/256 (CN)
 - G08G1/0955 (CN)
 - H02J7/35 (CN)
 PA - JILIN VENUS INTELLIGENT TECH
 CO LTD
 TI - Intelligent mobile **traffic light**
 capable of providing GNSS
 base station differential data
 AB - The invention discloses an
 intelligent mobile **traffic light**
 capable of providing GNSS
 base station differential data,
 which comprises a GNSS
 board card, an
 integrated **control** unit, a
 radio station module, a 4G
 network module, a **traffic light**
 display **control** unit and
 a **solar** panel, wherein the
 GNSS board card is connected
 to a GNSS antenna, and the
 GNSS board card is connected
 with the integrated **control**
 unit; the integrated **control**
 unit is connected with the
 radio station module and the
 4G network module, the radio
 station module is connected
 with a radio station antenna,
 and the 4G network module is
 connected with a 4G antenna;



the integrated **control** unit is connected with the **traffic light** display **control** unit, and the **traffic light** display **control** unit is connected with a traffic lightdisplay module; and the integrated **control** unit is further connected with a **solar** panel rotating motor, and the **solar** panel rotating motor is connected with the **solar** panel. The intelligent mobile **traffic light** combines the GNSS technology and the mobile **traffic light**, and can enable the **traffic light** to obtain the standard time for synchronization through obtaining the UTC (universal time coordinated) time while interacting information with an automatic driving vehicle so as to perform effective timestamp marking on the interaction information.

49/291 © EPODOC / EPO

PN - [CN109559534](#) A 20190402
 PR - CN201710875243 20170925
 AP - CN201710875243 20170925
 DT - I
 CI - G08G1/095 (CN)
 PA - YANGZHOU DENGKUI
 LIGHTING EQUIPMENT CO LTD
 TI - **Solar-energy traffic**
 signal **light** based on modular
 signal light units
 AB - The invention discloses
 a **solar-energy traffic**
 signal **light** based on modular
 signal light units. The signal
 light includes a riser,
 crossbars and the plurality of
 signal light units. A mounting
 cavityis in the riser.
 A **controller**, a first charging
 and discharging circuit, a
 wireless communication unit,
 a first battery and a first
 Bluetooth unit are disposed
 in the mounting cavity. A



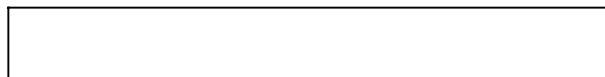
first **solar**-energy panel is mounted on the top of the riser. The signal light units include mounting plates. Front surfaces of the mounting plates have light emitting units. Sliding blocks are fixed at rear surfaces of the mounting plates. Locking bolts capable of locking relative positions of the sliding blocks and the crossbars are at the sliding blocks. **Control** boxes are mounted on the tops of the mounting plates. Microprocessors, second charging and discharging circuits, second batteries and second Bluetooth units connected with the first Bluetooth unit are in the **control** boxes. Second **solar**-energy panels are mounted on the tops of the **control** boxes through second brackets. The **traffic** signal **light** of the invention is modular, is convenient to use, and adapts to needs of different road surfaces.

50/291 © EPODOC / EPO

PN	- CN109493625 A 20190319	
PR	- CN201811375880 20181119	
AP	- CN201811375880 20181119	
DT	- I	
CCA	- Y02B20/40	
CI	- G08G1/095 (CN) - H02J7/35 (CN) - H05B47/20 (CN)	
CA	- Y02B20/40 (EP)	
PA	- UNIV FOSHAN	
TI	- Traffic light powered by solar energy and capable of being networked to remotely control time frequency	
AB	- The invention relates to a traffic light powered by solar energy and capable of being networked to remotely control	

time frequency. The **traffic light** comprises a light body and a guard bar, wherein the top end of the light body is connected with a frame plate, the inner wall of the top end of the light body closely fits the inner wall of the top end of the inner portion of the frame plate, the left end and right end of the inner portion of the bottom end of the frame plate are fixedly provided with buckle plates, the buckle plates are fixedly connected with the frame plate, the inner sides of the buckle plates are provided with extrusion columns, and the left side and right side of the light body are connected with movable columns. The **traffic light** has the advantages that connecting plates move between connecting rods and adjusting columns, thereby being capable of buckling the connecting plates on the frame plate and buckle plates; through the buckle plates and extrusion columns of the frame plate, the connecting plates can be firmly fixed on the frame plate, and the outer surface of the light body can be tightly protected; a certain safe distance between the connecting plates and the light body can be protected through the extrusion columns, and the electric shock phenomenon of the light body and connecting plates can be prevented.

51/291 © EPODOC / EPO
 PN - [CN208569886U](#) U 20190301
 PR - CN201820762782U 20180522
 AP - CN201820762782U 20180522
 DT - I
 PA - WEI MINGJIA



- TI - Signal **traffic light** that urban traffic adjusted with being convenient for
- AB - The utility model discloses a signal **traffic light** that urban traffic adjusted with being convenient for, comprising a base plate, bottom plate top outer wall welding has supporting box, and supporting box top inner wall has a motor through the bolt fastening, the motor passes supporting box top outer wall welding has spiral shell rasp bar, and spiral shell rasp bar outer wall threaded connection has a slider, supporting box top outer wall welding has the support column, and support column one side outer wall opens two bar holes that have the symmetric distribution, slider one side outer wall welding has two stoppers of symmetric distribution, and stopper and bar hole shape one -tenth sliding fit, stopper one side outer wall welding has the fixed plate, and outer wall welding has fixed tube on one side of the fixed plate, fixed pipe one side outer wall has the hinge through the bolt fastening. The utility model discloses increased the **controllability** of LED signal lamp height, installation road sign board when the road is emergent still utilizes **solar** energy transformation for the electric energy, installs in addition and to fold facilitate device's transportation and installation.

52/291 © EPODOC / EPO

PN - [CN109389841](#) A 20190226

PR - CN201710683180 20170811

AP - CN201710683180 20170811



DT	- I
CI	- E01F13/04 (CN) - E04H1/1205 (CN) - G08G1/095 (CN)
PA	- GUANGDONG HYDROGEN ENERGY SCIENCE & TECH CO LTD
TI	- Traffic light device
AB	- The present invention provides a traffic light device. The traffic light device comprises a traffic light body, a shielding mechanism, a control device and a power module. The control device is connected with the traffic light body, the shielding mechanism and the power module. The power module is connected with the traffic light body, the shielding mechanism and the control device. The shielding mechanism is an electric handrail or an electric valve; the electric handrail comprises a support, a handrail and a first drive motor, and one end of the handrail is arranged on the support through the connection mechanism; the first drive motor is connected with the connection mechanism at one end of the handrail through a first reduction gearbox to control the connection mechanism to be in a cross or vertical state; the upper portion of the shielding mechanism is provided with a sunshade, the upper surface of the sunshade is provided with a solar cell panel, and the power module comprises a rechargeable battery; and the solar cell panel is connected with the rechargeable battery to charge the rechargeable battery. The traffic light device

can improve the pass safety
and can reduce the traffic
accidents as much as
possible.

53/291 © EPODOC / EPO

PN - [CN208538321U](#) U 20190222
PR - CN201821417056U 20180831
AP - CN201821417056U 20180831
DT - I
PA - XUCHENGYAN
TI - Traffic **control** device based
on big data analysis of traffic
AB - The utility model discloses a
traffic **control** device based
on big data analysis of
traffic, including **solar** cell
panel, the big data **control**
box body, **traffic light** device,
mobile jib and power
supplyunit, there is **solar** cell
panel at the top of mobile jib
through connecting rod fixed
mounting, there is the big
data **control** box body in the
position department that the
mobile jib surface is closeto
the **traffic light** device through
connector fixed mounting,
there is the **traffic light** device
at the top on mobile jib
surface through connector
fixed mounting. The utility
model discloses set up **solar**
cell panel, **solar** cell panel
supplies power for the
electric energy **solar** energy
conversion to the device, has
avoided because external line
fault leads to the fact the
device's use, and this
traffic **control** device based
on big data analysis of traffic
has set up big data **control**
box, puts in order the data of
environment instantly
through big data **control** box,
then carries out equitable
adjustment to the transit time
of **traffic light** for the device
reaches the best to vehicle
allotment effect.



54/291 © EPODOC / EPO

PN - [CN208444438U](#) U 20190129

PR - CN201820951941U 20180620

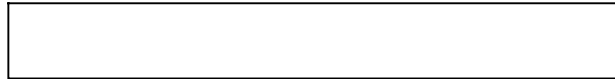
AP - CN201820951941U 20180620

DT - I

PA - CHENGDU SMAIT XINTONG
TECH CO LTD

TI - **Traffic light**
intelligence **control** system
that cloud calculated

AB - The utility model discloses
a **traffic light**
intelligence **control** system
that cloud calculated, the
power distribution box
comprises a box body, place
the battery on the bottom
inner wall of box, and has
had an air -blower through
the bolt fastening on the
bottom inner wall of box, the
welding has a tuber pipe on
the drum fan air outlet inner
wall, and goes out the top
division through -hole that
has the equidistance to
distribute of tuber pipe,
through the bolt fastening
having heaters on the bottom
inner wall of box, and the
output of heater is connected
with the play tuber pipe, be
equipped with the chamber
door on one side outer wall of
box, and open the mounting
hole that has the grade to
distribute on one side outer
wall of chamber door. The
utility model discloses can
the internal temperature of
real -time detection case, to
dispel the heat fast when the
temperature is higher,
humidity in can the real -time
detection box conveniently
dehumidifies when humidity
is too high fast, prevents the
too high troubles such as
short circuit that cause the
device of humidity, has
improved the security and the



suitability of device, can
utilize **solar** energy to
generate electricity, and
isenergy -concerning and
environment -protective.

55/291 © EPODOC / EPO

PN - [CN109243189](#) A 20190118
PNFP - CN109243189B B 20200410
PR - CN201811149164 20180929
AP - CN201811149164 20180929
DT - I
CT - || STSE (A)
[US2011156926](#) A1 20110630
[A] (CHEN YI-QUN [TW], et al)
[A] 1-9
* 全文 *;
[CN102818159](#) A 20121212
[A] (SHENZHEN CE LIGHTING CEL
CO LTD)
[A] 1-9
* 全文 *;
[CN105240787](#) A 20160113
[A] (SICHUAN NENGSHIDA ENERGY
SAVING TECHNOLOGY CO LTD)
[A] 1-9
* 全文 *;
[CN105822961](#) A 20160803
[A] (FU SHUZHEN)
[A] 1-9
* 全文 *;
[CN206377614U](#) U 20170804
[A] (SHUANGAN
PHOTOELECTRICITY TECH CO LTD)
[A] 1-9
* 全文 *;
[CN207438352U](#) U 20180601
[A] (ZHONGPEN ENG CONSULTING
CO LTD)
[A] 1-9
* 全文 *
CI - F21S9/035 (CN)
- F21V23/023 (CN)
- F21V29/503 (CN)
- F21V29/56 (CN)
- G08G1/095 (CN)
CA - F21Y2115/10 (CN)
PA - (A)
YANGZHOUFAMAINTELLIGENT
EQUIPMENT CO LTD

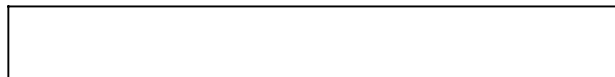


TI - (A)
Solar ground traffic light

AB - (A)
The invention discloses a **solar** ground **traffic light**, comprising a **controller**, a box body, and a transparent top plate. A first **solar** cell panel, a second **solar** cell panel and a lighting unit are fixed in the box body. A storage battery is fixed at a bottom plate. A heat conducting plate is arranged between the storage battery and a heat conducting block. A first heat conducting channel is formed in the heat conducting plate. A first channel is formed in the first side plate, and a second channel is formed in the second side plate. A liquid pump is provided at the first channel. A fixing block is fixed to the outer side of the first side plate. A cavity and an air inlet channel connected to the cavity are formed in the fixed block. A fan is provided at the air inlet channel, and a filter screen is provided at the inlet of the air inlet channel. The top end of the first side plate is provided with a plurality of blind holes. A movable block is arranged in each blind hole, and a spring is connected between the movable block and the bottom end of the blind hole. The movable block is provided with an air outlet channel. The **solar** ground **traffic light** adopts **solar** energy to generate electricity, and is good in heat dissipation and waterproofness.

56/291 © EPODOC / EPO

PN - [CN208384817U](#) U 20190115
PR - CN201821200896U 20180726
AP - CN201821200896U 20180726
DT - I
PA - WEI XIAOJUAN
TI - **Traffic light** system of most



volume lamp pearls of intelligent recognition analysis **control** detection

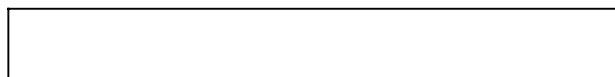
AB - The utility model relates to a technical field of traffic signals system, and disclose a **traffic light** system of most volume lamp pearls of intelligent recognition analysis **control** detection, comprising an one -chip microcomputer, the input of singlechip is connected with the output of AD converter electricity, the input of AD converter is connected with signal amplifier's output electricity, signal amplifier's input is connected with ambient brightness sensor's output electricity. This **traffic light** system of most volume lamp pearls of intelligent recognition analysis **control** detection, supply power for this **traffic light** system of most volume lamp pearls of intelligent recognition analysis **control** detection through setting up **solar** cell panel, correspond corresponding release knob respectively through on - off **control** unit and traffic signal lamp, **control** switch conveniently carries out, and carry out the real -time status feedback through the device for feed backing information who sets up to traffic signal lamp simultaneously, the convenience is organized into according to each LED lamp pearl, and line location overhauls, and then the very first time rush towards the scene and maintain.

57/291 © EPODOC / EPO

PN - [CN109191854](#) A 20190111

PR - CN201811278071 20181030

AP - CN201811278071 20181030



DT	- I
CI	- G08G1/0125 (CN) - G08G1/0145 (CN) - G08G1/04 (CN) - G08G1/08 (CN) - G08G1/081 (CN) - G08G1/095 (CN) - H02J7/35 (CN)
PA	- CHUZHOU CZESOU INFORMATION TECH CO LTD
TI	- Internet-based information continuous improvement system
AB	- The invention discloses an Internet-based information continuous improvement system, comprising a camera collection module and a solar power generation device, wherein the camera collection module comprises an image analysis unit, the image analysis unit is connected with an image extraction unit, the image extraction unit is connected with an image data processing unit, the image data processing unit is connected with an image data storage subunit and a traffic light line control center, the traffic light line control center is respectively connected with a machine distribution unit and a manual distribution unit, the machine distribution unit and the manual distribution unit are connected with a timer together, the timer is connected with intersection traffic lights through conducting wires, the solar power generation device is connected with a power voltage stabilization unit, and the power voltage stabilization unit is connected with a power storage unit. The design of the Internet-based information

continuous improvement system disclosed by the invention can continuously change the **control** times of the traffic lights in real time according to the difference of the traffic flow in different time periods, thereby ensuring the maximum driving amount.

58/291 © EPODOC / EPO

PN - [CN208351722U](#) U 20190108
 PR - CN20182194263U 20180711
 AP - CN20182194263U 20180711
 DT - I
 PA - UNIVCENTRAL SOUTH;
 SHENZHEN TRONIXIN PREC
 ELECTRONICS CO LTD
 TI - Novel **traffic** signal **light**
control device
 AB - The utility model discloses a novel **traffic** signal **light**
control device, including ACDC conversion module, ACDC voltage sample module, **solar** panel module, **solar** energy sampling module, a channel selection module, the first voltage stabilizing module of stepping up, storage battery charging module, battery, battery sampling module, **control** module, the 2nd channel selection module, second step up voltage stabilizing module, 5V voltage stabilizing module and voltage sample 0 voltage sample 1, ACDC conversion module converts the commercial power into low - voltage direct current, and **solar** panel module is low -voltage direct current with **solar** energy conversion, and **control** module selects all the way the electric energy through first voltage stabilizing module and the storage battery charging



module of stepping up for storage battery charging, the 2nd channel selection module choice of **control** module **control** is electric signal all the way, steps up voltage stabilizing module through the second and works with traffic signal lamp drive module drive traffic signal lamp. The utility model discloses reliability height, stable performance and low cost.

59/291 © EPODOC / EPO

PN - [CN208346669U](#) U 20190108
 PR - CN201820609503U 20180426
 AP - CN201820609503U 20180426
 DT - I
 CCA - [Y02E10/50](#)
 CA - Y02E10/50 (EP)
 PA - EMPERYLAND NEW ENERGY TECH SHANGHAI CO LTD
 TI - Rectangle **solar** energy wisdom zebra stripes
 AB - The utility model discloses a rectangle **solar** energy wisdom zebra stripes, including fire prevention ABS base, anti - skidding toughened glass layer, light source layer, microwave radar device, **controlcircuit**, polycrystalline silicon electricity generation board, street lamp signalling device, street lamp signal receiver, message pick -up processing **controls** ware, **solar** energy wisdom brick, infrared trigger and wisdom zebra stripes, the wisdom zebra stripes comprise a plurality of **solar** energy wisdom bricks, **solar** energy wisdom brick comprises fire prevention ABS base, anti -skidding toughenedglass layer, light source layer, microwave



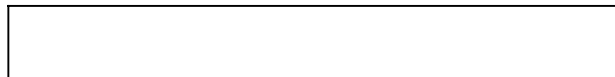
radar device, **control** circuit and polycrystalline silicon electricity generation board, fire prevention ABS base inboard is provided with light source layer, receives way lamp **control** signal through **solar** energy wisdom brick **controller**, compiles and **controls** the wisdom brick at crossing and organize the effect that realizes the wisdom zebra stripes, realizes the instruction and the guiding function of reinforcing **traffic light**, improves road safety, realizes that road intersection is intelligent to the partly of the whole framework in the green wisdom city in ground continent has been constituteed.

60/291	© EPODOC / EPO	
PN	- CN208235366U U 20181214	
PR	- CN201820608344U 20180426	
AP	- CN201820608344U 20180426	
DT	- I	
CCA	- Y02E10/50	
CA	- Y02E10/50 (EP)	
PA	- EMPERYLAND NEW ENERGY TECH SHANGHAI CO LTD	
TI	- Rectangle commercial power wisdom zebra stripes	
AB	- The utility model discloses a rectangle commercial power wisdom zebra stripes, including the zebra stripes body, the zebra stripes body comprises polyolith solar energy wisdom brick, solar energy wisdom brick bottom is provided with fire prevention ABS base, both sides are provided with light source layer in the solar energy wisdom brick, solar energy wisdom brick top is provided with the toughenedglass layer, is	

provided with microwave radar device, **control** circuit in the **solar** energy wisdom brick, and **solar** energy wisdom brick has the signal receiving and processing **controller** through **control** circuit electric connection, and signal receiving and processing **controller** electric connection has street lamp reception and transmission device, and street lamp reception and transmission device electric connection has street lamp microwave radar 1, and microwave radar device, infrared trigger are all through microwave radar 3 and signal receiving and processing **controller** electric connection. The instruction and the guiding function of this kind of wisdom zebra stripes reinforcing **traffic light** improve road safety, realize that road intersection is intelligent to the partly of the whole framework in the green wisdom city in ground continent has been constituted.

61/291 © EPODOC / EPO

PN - [CN208208103U](#) U 20181207
 PR - CN201820839985U 20180531
 AP - CN201820839985U 20180531
 DT - I
 PA - NINGBO FEISHANG AUTO PARTS CO LTD
 TI - Multi -functional **traffic light**
 AB - The utility model provides a multi -functional **traffic light** belongs to **traffic light** technical field. It has been solved current **traffic light** and has used inconvenient problem. The utility model relates to a multi - functional **traffic light** is including handing over



through rod, **traffic light**, rim, **solar** panel, battery, **controller**, dc -to -ac converter, battery, dc -to -ac converter, sheltering from mechanism, socket and feedback component. Wherein, through the effect of **solar** panel, **controller** and battery, can turn into the electric energy with light energy to in storing the battery, make the battery to supply power to the **traffic light** through the dc -to -ac converter, when the outage, the **traffic light** can also normally be worked, guarantees that the traffic is smooth, secondly, the electric energy has also been saved. Secondly, through feedback component's setting for traffic police team can know in time that the **traffic light** which was located damages, and the ability on -call maintenance, and makes the driver of driving can notice in time that **traffic light** here damages, and the speed reduction is gone slowly in advance, reduces the emergence of traffic accident.

62/291 © EPODOC / EPO

PN - [CN108961780](#) A 20181207

PR - CN201810817390 20180724

AP - CN201810817390 20180724

DT - I

CT - || STSE (A)

[CN106918012](#) A 20170704

[A] (UNIV SICHUAN)

[A] 1-7

* 全文 *;

[JP2018022431](#) A 20180208

[A] (KYOSAN ELECTRIC MFG)

[A] 1-7

* 全文 *;

[CN207247056U](#) U 20180417

[Y] (HUIZHOU DEGANG SOLAR ENERGY CO LTD)



[Y] 1-7

* 说明书第[0004]-[0022]段、附图1-2 *;

[CN108109408](#) A 20180601

[Y] (CHENGDU

ZHENG GUANG HENG ELECTRONIC
TECH CO LTD)

[Y] 1-7

* 说明书第[0004]-[0022]段、附图1 *

- CCA - [Y02B20/72](#)
- CI - F21S9/035 (CN)
- F21V23/04 (CN)
- F21V31/00 (CN)
- G08G1/07 (CN)
- G08G1/095 (CN)
- CA - Y02B20/72 (EP)
- PA - ANHUI TELECOM ENG CO LTD
- TI - Rainwater storage and receiving
type intelligent traffic guiding
device
- AB - The invention discloses a
rainwater storage and receiving
type intelligent traffic guiding
device. The rainwater storage
and receiving type intelligent
traffic guiding device comprises
a hollow bracing rod and a
hollow support rod; a rotating
sheath is arranged on an end of
the hollow support rod; the
rotating sheath is sleeved on the
hollow bracing rod; a three-
color intelligent **traffic light**
box and a first **solar** panel are
disposed on the hollow support
rod; an installation pipe is
arranged on an upper end of the
hollow bracing rod; a conical
rainwater receiving bucket are
arranged on an upper end of the
installation pipe; a second **solar**
panel is arranged on an inner
side of the rainwater receiving
bucket; a water conveying pipe
is connected to a lower end of
the installation pipe; and
a lower end of the water
conveying pipe extends out of
the hollow bracing rod and is
connected to a water tank

arranged on the bottom at one side of the hollow bracing rod. The rainwater storage and receiving type intelligent traffic guiding device can **control** on-off time of traffic lights with different colors in the three-color intelligent **traffic light** box to adjust the road circulation condition, can intelligently dredge vehicles on the road, can store and receive rainwater through the rainwater receiving bucket, can store the rainwater in the water tank, facilitates watering green plants, and can save energy and protect an environment.

63/291	© EPODOC / EPO	
PN	- CN208156875U U 20181127	
PR	- CN201820156677U 20180130	
AP	- CN201820156677U 20180130	
DT	- I	
PA	- JIANGSU RUIWO CONSTRUCTION GROUP CO LTD; CHEN QIQUAN	
TI	- Intelligent transportation lamp with anticollision stand	
AB	- The utility model discloses a traffic light technical field's an intelligent transportation lamp with anticollision stand, which comprises a lamp stand, the bottom outer wall interval of lamp pole is provided with two sets of gu fixed ring quan, gu fixed ring quan's outer wall is provided with the springiness cushioning pole, the other end of springiness cushioning pole is provided with the limiting ring board, and is two sets of be provided with the axis of rotation between the limiting ring board, the outer wall of axis of rotation is provided with anticollision buffering cylinder, the middle part outer wall of lamp pole is provided with the traffic	

light control box, the top outer wall of lamp pole is provided with **traffic light, traffic light's** top is provided with the weather shield,the top of weather shield is provided with **solar** panel support frame, **solar** panel support frame's top is provided with **solar** panel, **solar** panel's bottom is provided with the battery, and the device simple structure utilizes anticollision buffering cylinder and springiness cushioning pole, avoids the collision of car to lead to the lamp pole damage to influence traffic order.

64/291 © EPODOC / EPO

PN - [CN208077410U](#) U 20181109

PR - CN201820458505U 20180403

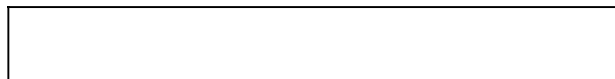
AP - CN201820458505U 20180403

DT - I

PA - YANGYAOEN;YANGCAN;
SHIJIAZHUANG INSTITUTE OF
RAILWAY TECH

TI - Movable **solar traffic light**

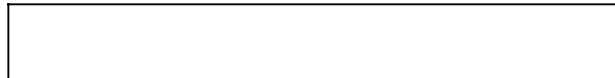
AB - The utility model discloses a movable **solar traffic light**, comprises a **solar** cell pane, the battery, the **control** of charge and discharge circuit, the traffic lights display module, voltage conversioncircuit, display **control** unit and button module, **solar** cell panel and battery are on the one hand through the **control** of charge and discharge circuit, voltage conversion circuit links to each other with display **control** unit, on the other hand passes through the **control** of charge and discharge circuit and links to each other with the traffic lights display module, the input that fills electrical signal output terminal and



battery of **control** of charge and discharge circuit links to each other, the **control** signal input of traffic lights display module links to each other with display **control** unit's signal output part, the signal output part of button module links to each other with display **control** unit's key signal input. The utility model discloses two kinds of powers on **solar** cell panel and the battery do not receive weather restriction and energy -concerning and environment -protective, can provide multiple display mode simultaneously for handling different road conditions. The utility model is suitable for a transportation technical field.

65/291 © EPODOC / EPO

PN - [CN208000681U](#) U 20181023
 PR - CN201820543718U 20180417
 AP - CN201820543718U 20180417
 DT - I
 PA - WU YUXIN; LIN XIAOLIN
 TI - Image recognition and intelligent transportation lamp **control** system based on singlechip
 AB - The utility model relates to a **traffic light control** field. The utility model discloses comprises singlechip, camera module, warning lamp module piece and power module, wherein the singlechip is used for image recognition and warning light **control**, the camera module be used for gathering outside mileage chart like, warn the lamp module piece and be used for showing warning light state and road condition, power module is used for to the mains power supply and utilizes **solar**



energy power generation. The utility model discloses a singlechip is gathered the image of camera module and is carried out recognition process to the image, then to bright the going out with warning passing vehicles of warning lamp module piece transmitting **control** signal **control** warning light to this intelligent **control** who realizes the road traffic situation.

66/291 © EPODOC / EPO

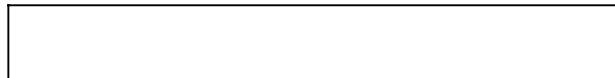
PN - [CN108633211](#) A 20181009
 PR - CN201810906364 20180810
 AP - CN201810906364 20180810
 DT - I
 CI - G08G1/07 (CN)
 - H05K5/0217 (CN)
 - H05K7/20136 (CN)
 PA - WUHUYAOFAN ELECTRONIC
 TECH CO LTD
 TI - Multifunctional **traffic light**
 electronic **control** cabinet for
 outdoor use
 AB - The invention discloses a
 multifunctional **traffic light**
 electronic **control** cabinet for
 outdoor use. The
 multifunctional
 electronic **traffic light**
 electronic **control** cabinet
 comprises a welding torch
 body, a gas delivery pipeline,
 a gas pipe connecting port, a
 welding switch, a power
 supply switch, a reflector, a
 sealing cover, an
 electronic **control** cabinet
 body, a storage battery, an
 outgoing hole, a mounting
 box, a base, a power
 supply **control** board, a
 circuit box, a **control** valve,
 an air box, a door lock, a
 closed door, a thermal
 insulation coating layer and
 a **solar** energy power



generation device. The multifunctional **traffic light** electronic **control** cabinet disclosed by the invention has the benefits that the power generation and the storage are performed by the **solar** energy power generation device, so that the use inside the **control** cabinet is convenient, and resources are saved; the **solar** energy power generation device is larger than the **control** cabinet so as to protect the **controlcabinet** from the sun and the rain; as a thermal insulation coating and a heat dissipation device are arranged, a circuit is protected, and the service lives of the **control** cabinet and the circuit are prolonged; bolts are **controlled** to be automatically tightened by an electric telescopic rod and a motor so as to be convenient for automatic installation and disassembly and labor-saving; the height of the **control** cabinet can be regulated, so that the problem of inconvenient maintenance due to height uncertainty caused by the uncertainty of maintenance personnel after installation is solved, and the maintenance efficiency is improved.

67/291 © EPODOC / EPO

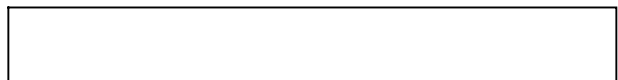
PN - [CN207852102U](#) U 20180911
 PR - CN201721924233U 20171231
 AP - CN201721924233U 20171231
 DT - I
 PA - ETHANE & THANE TIANJIN TECH CO LTD
 TI - **Solar** energy sense of touch ground transportation lamp
 AB - The utility model provides a **solar** energy sense of touch ground transportation lamp,



its characterized in that:
including pressure sensors
(1) and lamp body (4), lamp
body (4) are including setting
uptoughened glass (2) on
lamp body (4), and set up
device room (3) and circuit
room (5) in lamp body (4), be
provided with in the device
room (3) a plurality of
photovoltaic board (6), be
provided witha plurality of
LED banks (7) in the clearance
of photovoltaic board (6),
indoor be provided with
battery (10) and **control**
circuit (11) of circuit,
photovoltaic board (6) with
battery (10) are connected,
LED banks (7) are passed
through **control** circuit (11)
with battery (10) are
connected, **control** circuit (11)
respectively with pressure
sensors (1) and **traffic light**
signal connection. The
beneficial effects of the utility
model are that can
utilize **solar** energy for sense
of touch ground lamp energy
supply, it is energy -
concerning and environment -
protective when guaranteeing
trip safety, convenient to use.

68/291 © EPODOC / EPO

PN - [CN108492595](#) A 20180904
PR - CN201810170830 20180301
AP - CN201810170830 20180301
DT - I
CT - || STSE (A)
[CN101551944](#) A 20091007
[A] (SHANGHAI BAOKANG
ELECTRONIC CO [CN])
[A] 1-7
* 全文 *;
[CN204066401U](#) U 20141231
[Y] (CHENGDU GOLDTEL
INDUSTRY GROUP CO LTD)
[Y] 1-7
* 说明书第0005-0019段；附
图1、2 *;



[CN105118313](#) A 20151202

[A] (CAI QIAN)

[A] 1-7

* 全文 *;

[CN105513375](#) A 20160420

[A] (QINGDAO ACAD OF

INTELLIGENT IND, et al)

[A] 1-7

* 全文 *;

[CN106530772](#) A 20170322

[A] (SHENZHEN SHANGQIAO

INFORMATION TECH CO LTD)

[A] 1-7

* 全文 *;

[CN106781578](#) A 20170531

[Y] (SICHUAN VOCATIONAL &

TECHNICAL COLLEGE COMM)

[Y] 1-7

* 说明书第0006-0028段 *;

[CN107358802](#) A 20171117

[Y] (QINGDAO POLANGZHOU

VEHICLE AND BOAT

EQUIPMENT TECH CO LTD)

[Y] 1-7

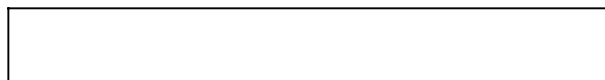
* 说明书第0006-0013段 *

- | | |
|----|--|
| CI | - G08G1/07 (CN) |
| | - G08G1/09 (CN) |
| | - G08G1/095 (CN) |
| PA | - MANING |
| TI | - Intelligent traffic guiding device |
| AB | - The invention discloses an intelligent traffic guiding device. The intelligent traffic guiding device comprises a main body, a traffic signal manager, a traffic light and an LED display screen; the top of the main body has a solar panel; the solar panel is fixedly connected with the main body, and the left end of the main body has a heat dissipation window; the heat dissipation window is fixedly connected with the main body; and a heat-reducing fan is arranged in the center of the heat dissipation window; the heat-reducing fan is movably connected with the heat dissipation window; a |

cabinet door is arranged on the front of the main body, and the cabinet door is fixedly connected with the main body. The intelligent traffic guiding device consists of a traffic signal manger, the **traffic light**, and the LED display screen, can **control** multiple road sections, and is high in guiding efficiency; the main body internally includes the intelligent computer, the traffic signal manager, a databaseserver, a network communication device, and a signal receiver, which are connected mutually to form a working system; the signal receiver receives the weather condition, and the traffic signal manager **controls** the signal lamp at an intersection.

69/291 © EPODOC / EPO

PN - [CN207815144U](#) U 20180904
 PR - CN201721792643U 20171220
 AP - CN201721792643U 20171220
 DT - I
 CCA - [Y02B20/72](#)
 CA - Y02B20/72 (EP)
 PA - LONGNANPRODUCTIVITY
 PROMOTION CENTER
 TI - **Solar** energy LED street lamp
 for road traffic
 AB - The utility model relates to
 a **solar** energy LED street lamp
 for road traffic,
 including **traffic light** ground
 substrate holder, **traffic light**
 ground substrate holder
 center department is
 equipped withthe installation
 base, be connected with the
 street lamp bracing piece on
 the installation base, just set
 connection installation base
 is inlayed to the street lamp
 bracing piece, be equipped
 with theaccess door on the
 street lamp bracing piece, the



access door inboard is equipped with video memory, just video memory is located street lamp bracing piece inner chamber, video memory one side is equipped with the battery, battery one side is equipped with PLC **control** chip, the access door top is equipped with the voice broadcast case, and this **solar** energy LED street lamp for road traffic can point out the transport information for the pedestrian in commander's traffic, save the signal appliance of people's bank of china of road, and have the voice broadcast function, and structural stability is strong, simple to operate, and the LED light provides the auxiliary illumination for the traffic, and the problem that effectively prevents night from to observe fuzziness traffic signals provides the illumination for monitor simultaneously, and the practicality is strong.

70/291 © EPODOC / EPO

PN - [CN108460978](#) A 20180828

PR - CN201810367330 20180423

AP - CN201810367330 20180423

DT - I

CCA - [Y02E10/50](#)

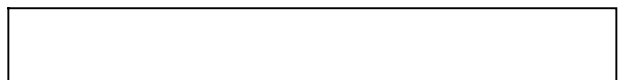
CI - G08G1/0955 (CN)
- H02S10/40 (CN)

CA - Y02E10/50 (EP)

PA - CHENGDU LANQING TECH CO LTD

TI - Novel multifunctional **traffic light**

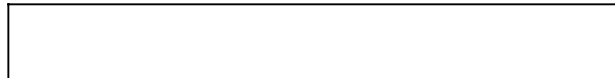
AB - The invention discloses a novel multifunctional **traffic light**. The novel multifunctional **traffic light** comprises a support assembly, a **traffic light** assembly and a power supply



assembly, wherein the support assembly comprises a base, a clapboard, a cylinder and rollers; the **traffic light** assembly comprises a **control** box, a **traffic light** pole, a **traffic light**, a video camera and a top plate; and the power supply assembly comprises a **solar** cell panel and an accumulator. By arranging a retractable mobile structure, the whole **traffic light** can be moved conveniently; and by arranging the **solar** cellpanel for supplying power to electrical components such as the **traffic light**, an energy-saving effect is achieved, and a lightning protection effect also can be achieved in thunderstorm days.

71/291 © EPODOC / EPO

PN - [CN207752643U](#) U 20180821
 PR - CN201820155855U 20180130
 AP - CN201820155855U 20180130
 DT - I
 PA - JIANGSU RUIWO
 CONSTRUCTION GROUP CO
 LTD; LIU ZHIQIN
 TI - Annular intelligent city **traffic light**
 AB - The utility model discloses an urban traffic lamp technical field's an annular intelligent city **traffic light**, including the lamp pole base, the top of lamp pole base is provided with the lamp pole, the outer wall bottom of lamp pole is provided with the scrolling display screen, the outer wall of lamp pole is provided with the **control** box, the outer wall of lamp pole is provided with limiting check ring, limiting check ring's top is provided with to adjust rotates the cover, adjust the outer wall that rotates the cover and be



provided with manual rotation handle, be located the lamp pole of adjusting rotation cover top transversely runs through has safe horizontal pole, lies in but the lamp pole outer wall of safe horizontal pole top is provided with the transposition sleeve, but the telescopic outer wall of transposition evenly is provided with four **traffic light** of group, is located the lamp pole outer wall of **traffic light** top is provided with road sign board, the top of lamp pole is provided with and hides the rain baffle, the top that hides the rain baffle is provided with **solar** panel, and the device possesses comprehensive road sign indication function, can change flexibly in the wagon flow peak period.

72/291 © EPODOC / EPO

PN - [CN108396675](#) A 20180814

PR - CN201810386738 20180426

AP - CN201810386738 20180426

DT - I

CCA - [Y02E10/50](#)

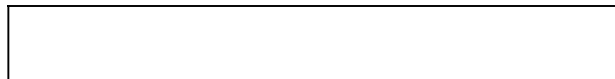
CI - E01F9/582 (CN)
- G08G1/07 (CN)
- G08G1/095 (CN)
- H02S10/00 (CN)

CA - Y02E10/50 (EP)

PA - EMPEYLAND NEW ENERGY
TECH SHANGHAI CO LTD

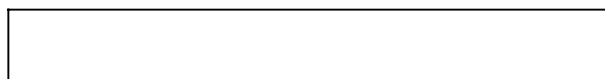
TI - Rectangular **solar** smart zebra crossing

AB - The invention discloses a rectangular **solar** smart zebra crossing. The zebra crossing includes fireproof ABS bases, antiskid tempered glass layers, light source layers, microwave radar devices, **control circuits**,



polycrystalline silicon power generating boards, a street lamp signal sending device, a street lamp signal receiving device, an information receiving and processing **controller**, multiple **solar** smart bricks, an infrared trigger and a smart zebra crossing body; the smart zebra crossing body is composed of the **solar** smart bricks, and each **solar** smart brick is composed of the corresponding fireproof ABS base, the corresponding antiskid tempered glass layer, the corresponding light source layer, the corresponding microwave radar device, the corresponding **control** circuit and the corresponding polycrystalline silicon power generating board. Each light source layer is arranged on the inner side of the corresponding fireproof ABS base, a street lamp **control** signal is received through a **solar** smart brick **controller**, and a smart brick set of an intersection is compiled and **controlled** to achieve the effects of the smart zebra crossing; the indication and guidance function of a **traffic light** is enhanced, the road safety is improved, and intelligentization of the intersection of a road is achieved, so that a part of an overall framework of an inland green smart city is constructed.

73/291 © EPODOC / EPO
 PN - [CN108399771](#) A 20180814
 PR - CN201810277858 20180331
 AP - CN201810277858 20180331
 DT - I
 CCA - [Y02E10/50](#)



CI	- G08G1/095 (CN) - H02S10/12 (CN)
CA	- Y02E10/50 (EP)
PA	- SICHUAN YOULIANG TECH CO LTD
TI	- Traffic signal device with self-provided power supply
AB	- The invention discloses a traffic signal device with a self-provided power supply. The device comprises a base, a display screen, a support rod, an intelligent control system, an infrared speedometer, intelligent traffic light boxes, a cross rod, a playing device, a solar panel, a wind power generator and a storage battery; the bottom of the support rod is fixedly connected to the base, and the solar panel is installed on the top of the support rod; the intelligent control system and the battery are all disposed inside the support rod; the display screen and the playing device are fixedly mounted on the support rod; the cross rod is fixedly connected to the support rod; the wind power generator is located on one side of the cross rod; the infrared speedometer is arranged above the cross rod; the intelligent traffic light boxes are arranged below the cross rod; two intelligent traffic light boxes are arranged; the solar panel and the wind power generator are connected to the storage battery, the storage battery is connected with the intelligent control system, and the intelligent traffic light boxes, the playing device, the display screen, the infrared speedometer and the intelligent control system are connected. The device has the

advantages of monitoring
vehicle flowrate in real time
and improving traffic
efficiency.

74/291 © EPODOC / EPO

PN - [CN108399770](#) A 20180814
PR - CN201810257559 20180327
AP - CN201810257559 20180327
DT - I
CCA - [Y02E10/56](#)
CI - G08G1/095 (CN)
- H02J7/35 (CN)
CA - Y02E10/56 (EP)
PA - SICHUAN YOULIANG TECH CO
LTD
TI - Rotary traffic flow guiding
device with clean energy
mechanism
AB - The invention discloses a
rotary traffic flow guiding
device with a clean energy
mechanism. The device
comprises a base, a
supporting column, an
intelligent **control** system, a
storage battery, lightning
prevention devices, a **solar**
battery panel, a camera, an
intelligent **traffic light** box and
a cross bar, the base is
arranged at the bottom of the
supporting column, the top of
the supporting column is
fixedly connected with the
cross bar, the
intelligent **control** system is
located on the cross bar, and
the storage battery is
arranged on the right side of
the intelligent **control** system;
the camera is arranged on the
cross bar; the lightning
prevention devices are fixed
on the left and right sides of
the camera respectively; the
intelligent **traffic light** box is
arranged below the cross bar;
the solar battery panel is
located above the camera,
the **solar** battery panel is



connected with the storage battery, the storage battery is connected with the intelligent **control** system, and the intelligent **control** system is connected with the intelligent **traffic light** box. The device has the advantages of being simple in structure, high in safety performance and convenient to use.

75/291 © EPODOC / EPO

PN - [CN207704650U](#) U 20180807
 PR - CN20182057577U 20180115
 AP - CN20182057577U 20180115
 DT - I
 PA - UNIVSICHUANAGRICULTURAL
 TI - Small -size **solar** energy traffic signal lamp device
 AB - The utility model provides a small -size **solar** energy traffic signal lamp device, adopt the embedded **controller** technique, the display technique, the touch button technique, the **solar** charging technique designs, by ARM **controller** (1), timing display (2), traffic signal lamp (3), touch button module (4), voltage display circuit (5), battery (6), **solar** charging circuit (7) are common to be constituteed, through the ARM **controller**, realize count -down traffic state **control**, fall timing function, **traffic light control**, through the touch button module, realize device traffic state **control**, through voltage display circuit, realize that battery voltage shows the function, through **solar** charging circuit, realize the storage battery charging function, this device has characteristics such as the practicality is stronger, simple to use and reliable



and stable.

76/291 © EPODOC / EPO

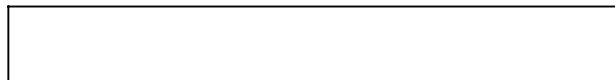
PN - [CN108288396](#) A 20180717
PR - CN201711411707 20171223
AP - CN201711411707 20171223
DT - I
CI - G08G1/095 (CN)
PA - CHENGDUZHENGGUANGHENG
ELECTRONIC TECH CO LTD
TI - Detachable intelligent traffic
guiding device of intelligent
traffic system
AB - The invention discloses a
detachable intelligent traffic
guiding device of an
intelligent traffic system. The
detachable intelligent traffic
guiding device includes a
hollow support rod and a
hollow bracket rod. A
positioning table is arranged
on the outer side of the upper
end of the hollow support
rod. The positioning table is
in threaded connection with a
positioning seat. The
positioning seat is provided
with a positioning groove. A
rotary sheath is also
arranged at the upper end of
the hollow support rod. The
outer side of the rotary
sheath protrudes outwards to
form a threaded positioning
column with a through hole. A
wiring hole communicated
with the through hole is
arranged in the side of the
hollow support rod. The
hollow bracket rod is in
horizontal threaded
connection with the threaded
positioning column. The
hollow bracket rod is
movably connected with a
three-color intelligent **traffic
light** box and a **solar** cell
panel. An insulating movable
plate is arranged inside the
hollow bracket rod.



A **controller** and a storage battery are arranged at the upper end of the insulating movable plate. The **solar** cell panel is connected with the storage battery. The storage battery is connected with the **controller**. The **controller** is connected with the three-color intelligent **traffic light** box. The detachable intelligent traffic guiding device of the intelligent traffic system is very convenient to transport, install, maintain and disassemble, and a lot of manpower, material resources and cost are saved.

77/291 © EPODOC / EPO

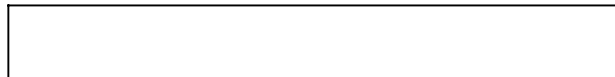
PN - [CN108281019](#) A 20180713
 PR - CN20181090304 20180130
 AP - CN20181090304 20180130
 DT - I
 CI - G08G1/095 (CN)
 PA - JIANGSU RUIWO CONSTRUCTION GROUP CO LTD; CHEN QIQUAN
 TI - Intelligent traffic lamp with anti-collision upright post
 AB - The invention discloses an intelligent traffic lamp with an anti-collision upright post, and belongs to the technical field of the traffic lamp. The intelligent traffic lamp comprises a light pole, and two groups of fixing rings are arranged at the outer wall of the bottom part of the light pole at intervals; the outer walls of the fixing rings are provided with elastic buffer rods, the other ends of the elastic buffer rods are provided with limiting ring plates; a rotary shaft is arranged between two groups of limiting ring plates, and the outer wall of the rotary shaft is provided with an anti-



collision buffer cylinder; the outer wall in the middle part of the light pole is provided with a **traffic light control** box, the outer wall at the top part of the light pole is provided with a traffic indicating lamp, the top part of the traffic indicating lamp is provided with a rain shed; the top part of the rain shed is provided with a **solar** panel bracket, the top part of the **solar** panel bracket is provided with a **solar** panel; the bottom part of the **solar** panel is provided with a storage battery; the device is simple in structure; by using an anti-collision buffer cylinder and an elasticbuffer rod, the influence of damaged light pole on the traffic order caused by the automobile collision is avoided.

78/291 © EPODOC / EPO

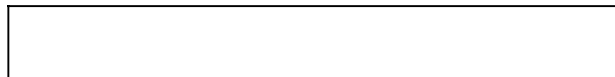
PN - [CN108242161](#) A 20180703
 PR - CN201611229694 20161227
 AP - CN201611229694 20161227
 DT - I
 CI - G08G1/08 (CN)
 PA - XIAN PINZHI INF TECH CO LTD
 TI - Intelligent **traffic light** warning system based on BIM model
 AB - The invention belongs to the technical field of traffic management facilities, and discloses an intelligent **traffic light** warning system based on BIM model, which comprises a BIM **control** platform and a **traffic light control** platform, wherein the **traffic light control** platform comprises a **controller** and a traffic monitoring device, a surveillance camera, traffic lights and a **solar** panel; the



BIM working platform comprises a BIM 3D model information module, a remote **control** center, a monitoring room and a BIM mobile device; and both the remote **control** center and the monitoring room are both connected with the **controller**. Through adding the traffic monitoring device and the BIM 3D model information module on the traffic lights at an intersection, the **traffic light** warning system process in the invention presents 3D visualization, more visual supervision and **control** can thus be realized, the time duration of the **traffic light** can be **controlled** intelligently according to the traffic, and a traffic policemen can perform real-time observation and effective field guidance through the BIM mobile device on the hand.

79/291 © EPODOC / EPO

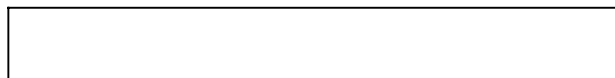
PN - [CN108172000](#) A 20180615
 PR - CN201711411760 20171223
 AP - CN201711411760 20171223
 DT - I
 CI - G08G1/095 (CN)
 PA - CHENGDU ZHENG GUANG HENG ELECTRONIC TECH CO LTD
 TI - Detachable waterproof traffic guide device of intelligent traffic system
 AB - The invention provides a detachable waterproof traffic guide device of an intelligent traffic system. The detachable waterproof traffic guide device includes a hollow supporting rod and a hollow support rod, a positioning table is arranged on the outer side of the upper end of the hollow supporting rod, a



positioning groove is formed in the positioning base, the lower end of a rotating protective sleeve is arranged in the positioning groove, the outer side of the rotating protective sleeve protrudes outwards to form a threaded positioning column with a through hole, the hollow support rod is horizontally and threadedly connected with the threaded positioning column, the hollow support rod is movably connected with a three-color intelligent **traffic light** box and a **solar** cell panel, an insulating movable plate is arranged inside the hollow support rod, a **controller** and a storage battery are arranged at the upper end of the insulating movable plate, three colors of direction changing indication lamps are arranged in the three-color intelligent **traffic light** box. The detachable waterproof traffic guide device further includes a waterproof board and a circuit line waterproof structure, wherein the waterproof board is arranged inside the hollow support rod, and the circuit line waterproof structure is arranged at the lower end inside the hollow support rod, and the waterproof board is used for isolating the **controller** from the storage battery. The device is quite convenient to transport, install and maintain, and has good water resistance.

80/291 © EPODOC / EPO

PN - [CN207380905U](#) U 20180518
 PR - CN201721508984U 20171114
 AP - CN201721508984U 20171114



DT	- I
PA	- UNIV CHINA MINING
TI	- Intelligent traffic light
AB	- The utility model discloses an intelligent traffic light , including the lighting fixture, the lighting fixture top is equipped with image recognition equipment, the fixed traffic light that is equipped with in image recognition equipment top, be equipped with solar cell panel on the lighting fixture of safety cover below, the solar cell panel below is equipped with control module, be equipped with microprocessor in the control module, wireless network transmitter and battery, solar cell panel and battery are that camera, microprocessor, wireless network transmitter and traffic light provide the electric power support. The beneficial effect of the utility model: adopting and regularly shooting, upload high in the clouds, save a large amount of electric power, economy is the environmental protection again, according to implementing the traffic, carry out the intellectuality and adjust the street lamp, ensure that the traffic is in the same direction as reaching current safety.