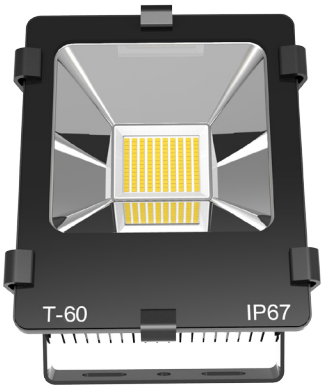
®

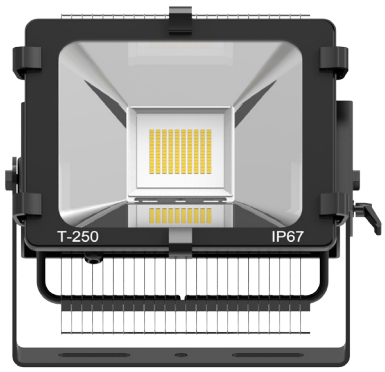
Thermal Solution
LED Floodlight IP67

CITIZEN COB

CITILED®
The Light Engine

MW
MEAN WELL





The A+ Group

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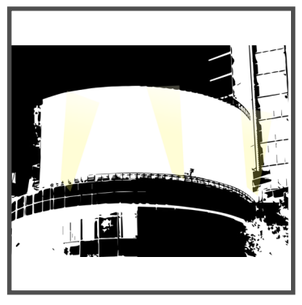
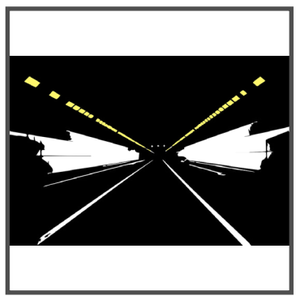
Thermal Solution Design For Standard & Dimmable Applications

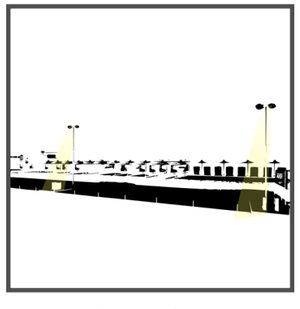


Billboard



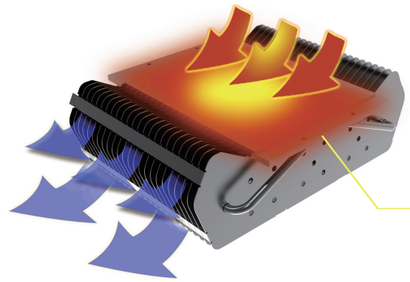
Tunnel

Building Illumination



Seaside

Continuous Stacked Fin Technology

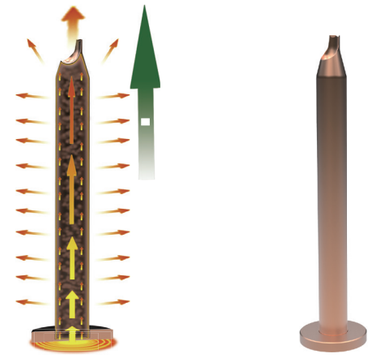


- Massive Heat Dissipation Area
- Patent Stacked Fin and Zipper
- Perfect Contact between Heatpipe and Fin

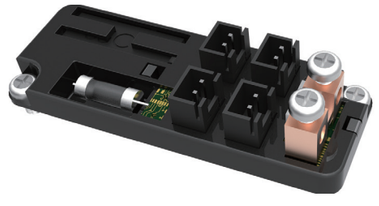
Gear slotting fins provide perfect contact between fins and the conductivity panels to ensure the best heat transfer. Two ventilation channels formed through specially design heatsink fins can take the heat away from the LED bottom and then dissipate away rapidly.

Vapor Chamber Heat Transfer

- Copper Base Touches Heat Source Direct
- Instant Vaporization to Transfer Heat



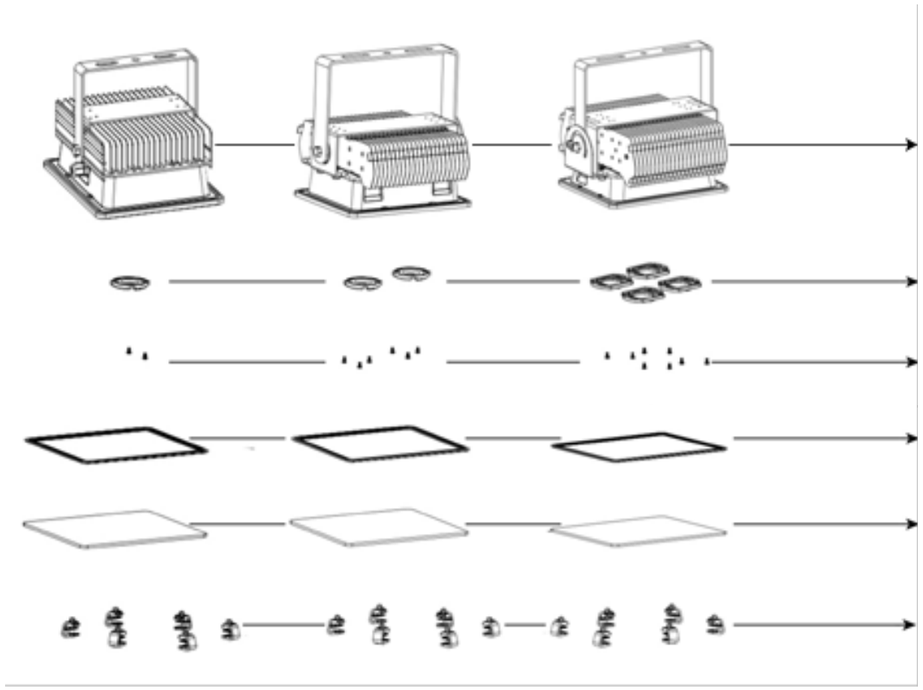
Automatically Lower Current When Overheating



- Automatically Lower Current When Overheating
- Automatically Rise Current at Normal Temp
- Current Adjustable

- Diagram of Airflow Design

Product Explosion Diagram

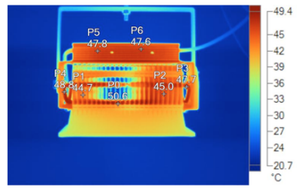


Replaceable and Changeable Parts

(1) LED Chip (2) Reflector (3) LED Driver
(4) Tempered Glass (5) Clips

Thermal Temperature Test

Radiator：T250 radiation suite，The fin with heat pipes



2015/11/28 9:03:57

Image Information

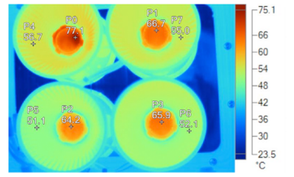
Average Temperature	27.7°C
Image Range	20.5°C - 50.6°C
Type of thermal imager	Ti400
Size of Infrared Sensor	320 x 240
File Position	C:\ Users\ LED07\ Desktop\ fluke\ IR_00563.IS2
Range	-20.0°C - 80.0°C
Distance	1.17m

Main Image Label

Number	Temperature	Remarks
P0	50.6°C	Fin
P1	44.7°C	Fin
P2	45.0°C	Fin
P3	47.7°C	Heat Pipe
P4	48.8°C	Heat Pipe
P5	47.8°C	Power
P6	47.6°C	Power

Remarks： **4 hour startup lighting**

Type of LED	LED Structure	Panel Power	Environment Temperature / Humidity
CLU046-1212C1	4PCS	250W（Including Total Driving Power）	25℃/65%



2015/11/28 9:07:53

Image Information

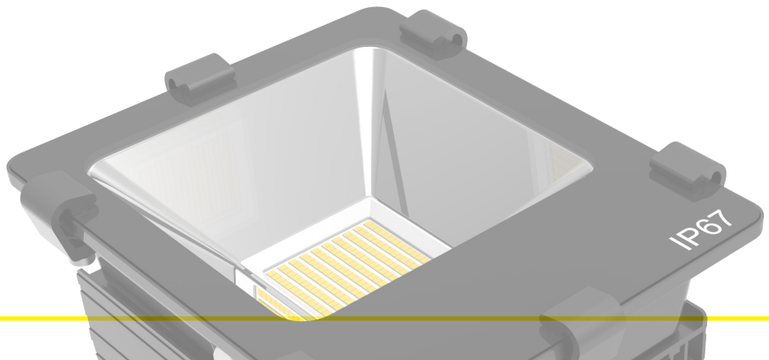
Average Temperature	47.7°C
Image Range	23.4°C - 77.3°C
Type of thermal imager	Ti400
Size of Infrared Sensor	320 x 240
File Position	C:\ Users\ LED07\ Desktop\ fluke\ IR_00564.IS2
Range	-20.0°C - 80.0°C
Distance	0.00m

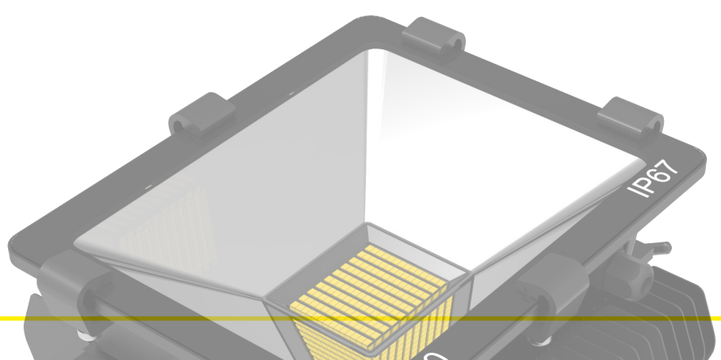
Main Image Label

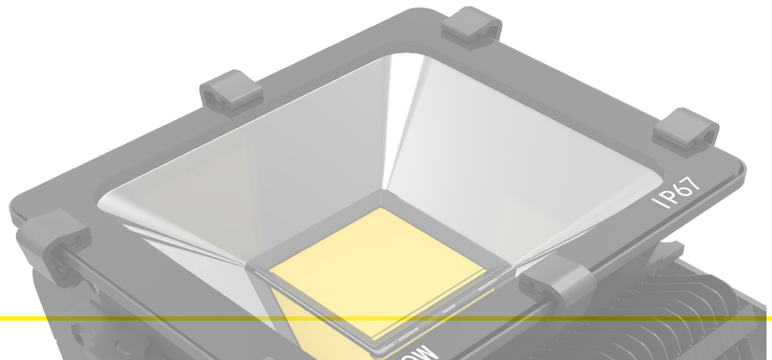
Number	Temperature	Remarks
P0	77.1°C	Light Source
P1	66.7°C	Light Source
P2	64.2°C	Light Source
P3	65.9°C	Light Source
P4	56.7°C	Reflector
P5	51.1°C	Reflector
P6	52.1°C	Reflector
P7	55.0°C	Reflector

Remarks： **4 hour startup lighting**

Requirements：If the temperature range of the radiator base is 50.6℃ to 65℃ will be suitable apply in 250W LED cooling application.



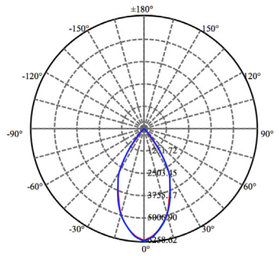


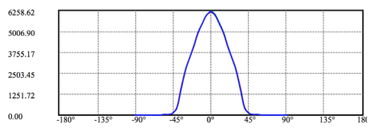


Luminance Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]

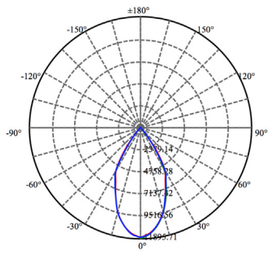
T60
60°COB

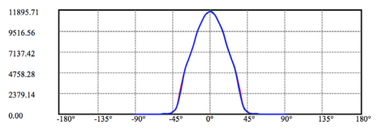




C30(Max):
C0/C180:
C90/C270:
Field angle(10%Imax):C0/180Left:39.5 Right:39.5
:C90/270Left:39.3 Right:39.3
Beam Angle(50%Imax):C0/180Left:27.3 Right:27.3
:C90/270Left:27.0 Right:27.0

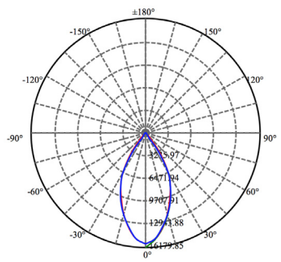
T100
60°COB

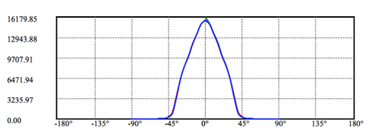




C30(Max):
C0/C180:
C90/C270:
Field angle(10%Imax):C0/180Left:39.1 Right:39.1
:C90/270Left:38.9 Right:38.9
Beam Angle(50%Imax):C0/180Left:26.9 Right:26.9
:C90/270Left:26.9 Right:26.9

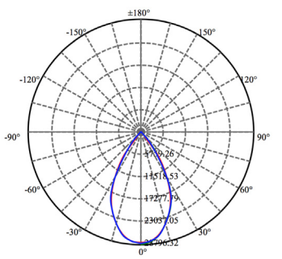
T150
60°COB

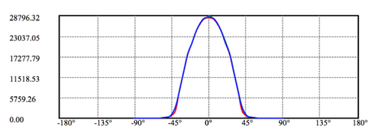




C30(Max):
C0/C180:
C90/C270:
Field angle(10%Imax):C0/180Left:39.1 Right:39.1
:C90/270Left:38.5 Right:38.5
Beam Angle(50%Imax):C0/180Left:26.4 Right:26.4
:C90/270Left:26.3 Right:26.3

T250
60°COB

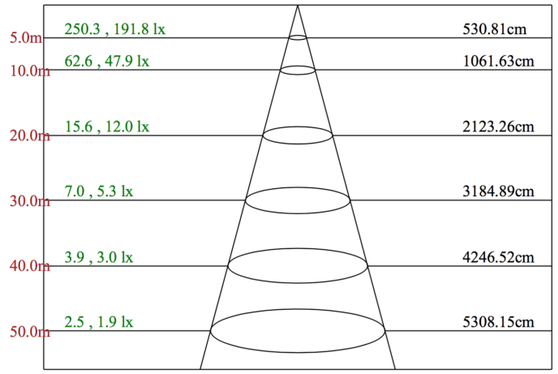




C30(Max):
C0/C180:
C90/C270:
Field angle(10%Imax):C0/180Left:39.6 Right:39.6
:C90/270Left:41.1 Right:41.1
Beam Angle(50%Imax):C0/180Left:29.0 Right:29.0
:C90/270Left:29.1 Right:29.1

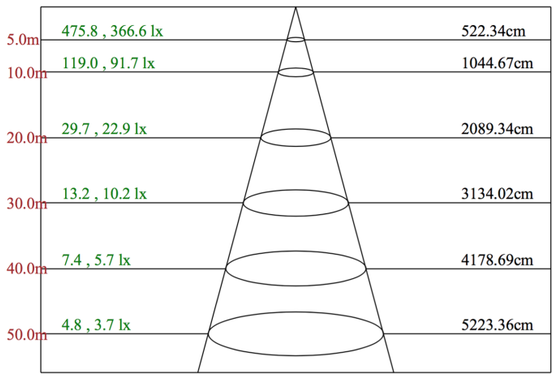
Cone Lux Diagram

T60
60°COB



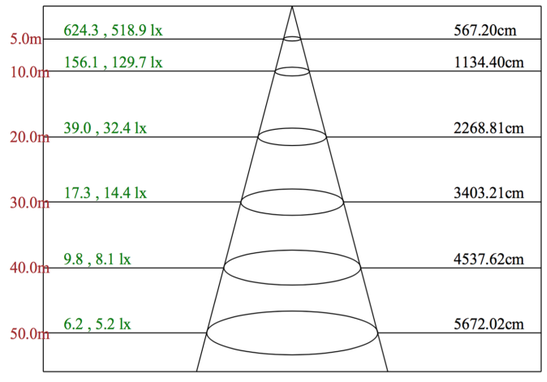
Max , Ave Beam angle of C30plane55.92

T100
60°COB



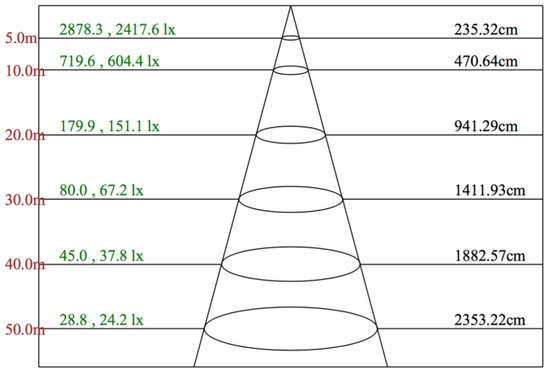
Max , Ave Beam angle of C30plane55.16

T150
60°COB



Max , Ave Beam angle of C30plane59.12

T250
60°COB



Max , Ave Beam angle of C30plane26.48

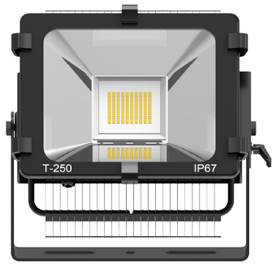
Product Dimension

T30 / T60

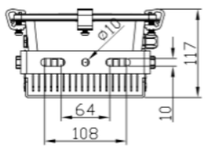
SMD Version

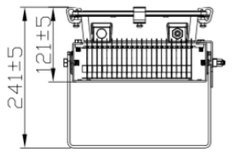
T100 / T150

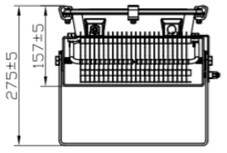
T200 - T300

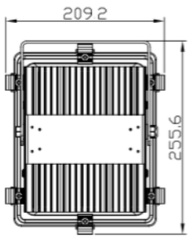


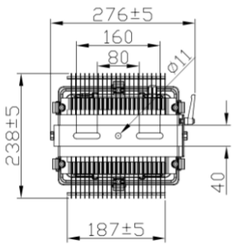
COB Version

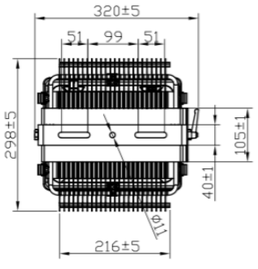






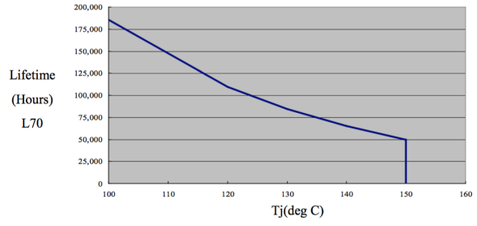






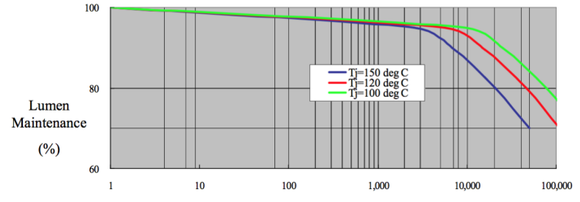
LED Chip LM80 & TM21 Lifetime Prediction Curve

(1) Lifetime for CLL050 Series IF=120mA/die



Note 1) No guaranteed values.
Note 2) Failure criterion: lumen maintenance 70% or less.
Note 3) CITIZEN ELECTRONICS CO., LTD. reserves the right to make changes to technical information or data without notification.
Note 4) L70 is a life time when the lumen maintenance becomes 70%.
Note 5) The above data has no luminescent color-related difference.
Note 6) The lifetime prediction results above do not change if the current is within a range IF=120mA/die that is the absolute maximum rating
Note 7) Only for CLL050, Tjmax is 150 deg C and IFmax is 120mA/die.

(2) Lifetime for CLL050 Series IF=120mA/die



Note 1) No guaranteed values.
Note 2) CITIZEN ELECTRONICS CO., LTD. reserves the right to make changes to technical information or data without notification.
Note 3) The above data has no luminescent color-related difference.
Note 4) The lifetime prediction results above do not change if the current is within a range IF=120mA/die that is the absolute maximum rating.
Note 5) Only for CLL050, Tjmax is 150 deg C and IFmax is 120mA/die.

TM-21 Report

Table 1: Report at each LM-80 Test Condition

Description of LED Light Source Tested (manufacturer, model, catalog number)	CLL042 series				
Test Condition 1 - 55°C Case Temp		**Test Condition 2 - 85°C Case Temp**		**Test Condition 3 - 105°C Case Temp**	
Sample size	20	Sample size	20	Sample size	20
Number of failures	0	Number of failures	0	Number of failures	0
DUT drive current used in the test (mA)	2160	DUT drive current used in the test (mA)	2160	DUT drive current used in the test (mA)	2160
Test duration (hours)	7,000	Test duration (hours)	7,000	Test duration (hours)	7,000
Test duration used for projection (hour to hour)	2,000 - 7,000	Test duration used for projection (hour to hour)	2,000 - 7,000	Test duration used for projection (hour to hour)	2,000 - 7,000
Tested case temperature (°C)	55	Tested case temperature (°C)	85	Tested case temperature (°C)	105
α	1.914E-06	α	9.637E-07	α	4.629E-06
B	0.993	B	0.983	B	0.986
Calculated L70(7K) (hours)	183,000	Calculated L70(7K) (hours)	353,000	Calculated L70(7K) (hours)	74,000
Reported L70(7K) (hours)	>42000	Reported L70(7K) (hours)	>42000	Reported L70(7K) (hours)	>42000

Table 2: Interpolation Report (projection based on *in-situ* temperature entered)

$T_{s,1}$ (°C)	85.00
$T_{s,1}$ (K)	358.15
α_1	9.637E-07
B_1	0.983
$T_{s,2}$ (°C)	105.00
$T_{s,2}$ (K)	378.15
α_2	4.629E-06
B_2	0.986
E_a/k_b	1.06E+04
A	7.417E+06
B_0	0.985
$T_{s,j}$ (°C)	101.00
$T_{s,j}$ (K)	374.15
α_j	3.428E-06
Projected L70(7k) at 101°C (hours)	100,000
Reported L70(7k) at 101°C (hours)	>42000

Standard Ordering Data

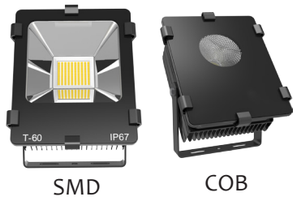
Model No.	T30	T60	T100	T150	T200	T250	T300
Power Consumption (W)	30W	60W	100W	150W	200W	250W	300W
Lumen Per Watt (lm/w)	100-110						
Input Voltage (AC)	100-240v/50/60 Hz						
C R I	80-90						
C C T	3000k / 4000k / 5000k						
Bean Angle	15˚/ 30˚/ 60˚/ 90˚/ 110˚						
Power Factor	> 0.9						
Working Temperature	-20°C ~ 48°C						
IP Rating	IP 67						
LED Chip	CITIZEN / Philips / Cree						
LED Lifespan	35,000-50,000 hrs						
LED Driver	MEAN WELL						
Product Size (L×W×H) (mm)	209×256×117	209×256×117	276×238×241	307×298×270	320×298×275	320×298×275	320×298×275
Product Weight / Estimate	3.27kg	3.27kg	4.75kg	6.2kg	6.6kg	6.6kg	6.6kg
Product Standard							
Product Warranty	5-years limited warranty						

Product Certifications and Standards				
Standard	Rohs	IP	EMC	LVD
Certificate Standards	IEC 62321	IEC 60529	EN-55015: 2013	EN-60598-1: 2015
			EN-61547: 2009	EN-60598-2-5: 2015
			EN-61000-3-2: 2014	EN-62471: 2008
			EN-61000-3-3: 2013	EN-62493: 2010
				IEC-62778: 2014
				EN-62031: 2008
				IEC-61347-1: 2007
				IEC-61347-2-13:2006
				IEC-62384

Dimmable Ordering Data

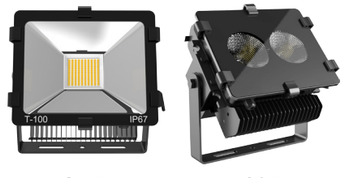
Model No.	T30DM	T60DM	T100DM	T150DM	T200DM	T250DM	T300DM
Power Consumption (W)	30W	60W	100W	150W	200W	250W	300W
Lumen Per Watt (lm/w)	100-110						
Input Voltage (AC)	100-240v/50/60 Hz						
C R I	80-90						
C C T	3000k / 4000k / 5000k						
Bean Angle	15˚/ 30˚/ 60˚/ 90˚/ 110˚						
Power Factor	> 0.9						
Working Temperature	-20°C ~ 48°C						
IP Rating	IP 67						
LED Chip	CITIZEN / Philips / Cree						
LED Lifespan	35,000-50,000 hrs						
LED Driver	MEAN WELL						
Dimming Option	0-10V / DMX512						
Product Size (L×W×H) (mm)	209×256×117	209×256×117	276×238×241	307×298×270	320×298×275	320×298×275	320×298×275
Product Weight / Estimate	3.27kg	3.27kg	4.75kg	6.2kg	6.6kg	6.6kg	6.6kg
Product Standard							
Product Warranty	5-years limited warranty						

T30 / T60



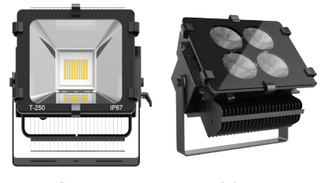
SMD COB

T100 / T150



SMD COB

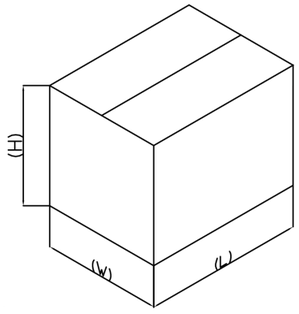
T200 - T300



SMD COB

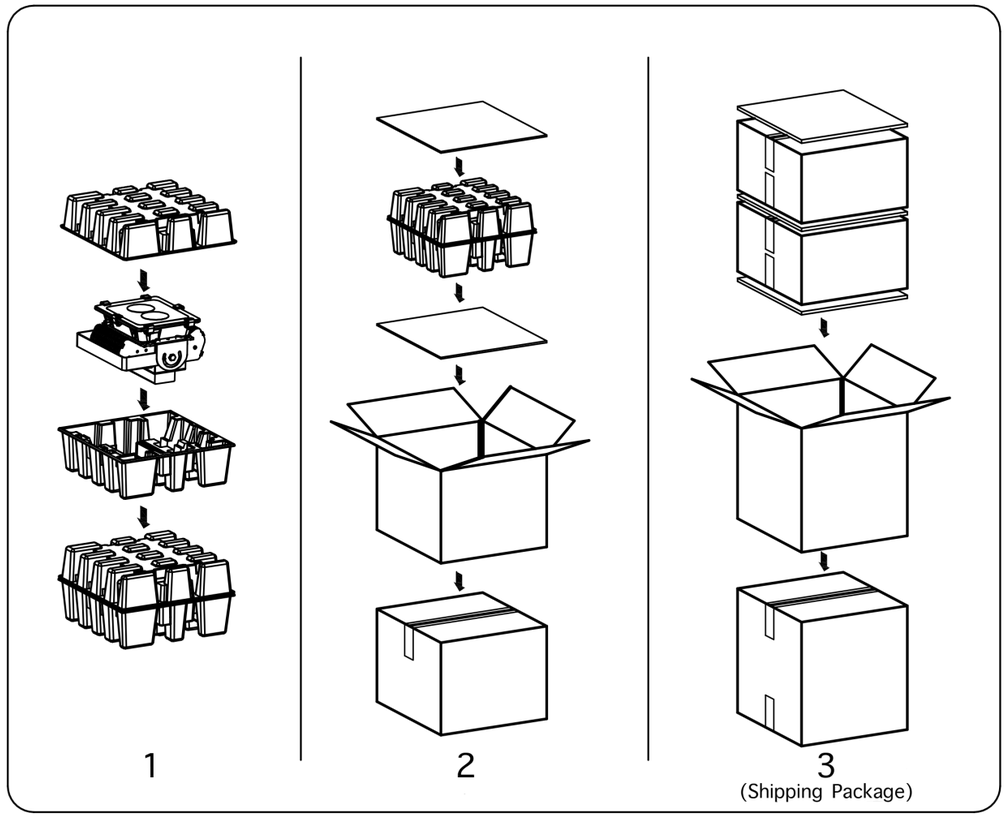
Package Details

Name	Size (L x W x H)
Small Carton	420 x 400 x 260mm
Big Carton	412 x 412 x 550mm
Small Carton Partition	385 x 385 x 6mm
Big Carton Partition	400 x 400 x 6mm



- Qty: 1PCS / Carton, 2 Small Cartons / 1 Big Carton
- N.W: 4.2Kg / pcs G.W: 7.5Kg
- Vol: 412mm x 412mm x 550mm ≈ 0.09 m³

PACKAGE VIEW



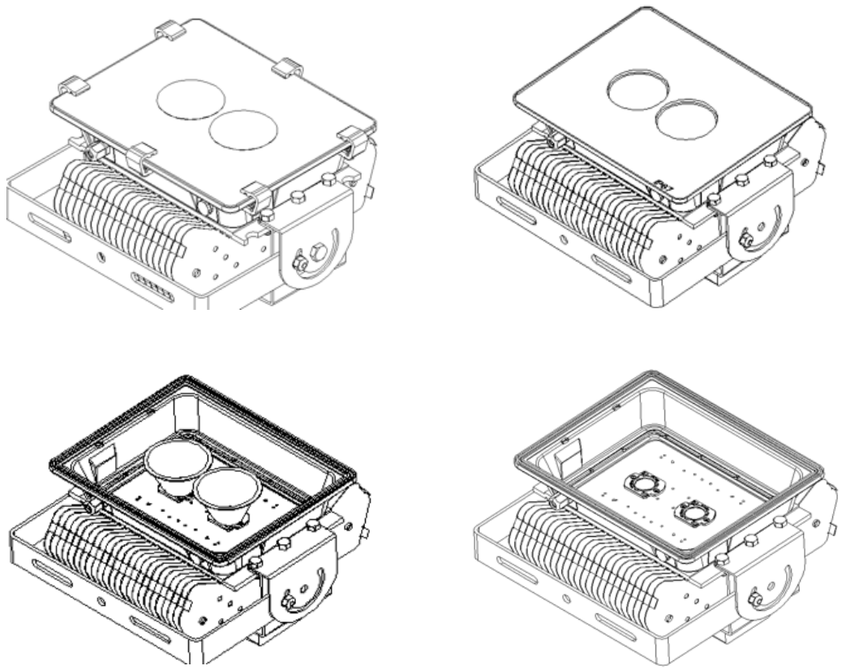
REPLACEMENT GUIDE FOR A+ LED Floodlights

Note:

A. Professionals or specially trained people are recommended to do any maintenance.
B. Waters are strictly not allow to enter inside the fitting or any electrical components during maintenance.
C. Before attempting to do any maintenance please make sure to turn off the AC power and let the fitting cool down before any further actions.

STEPS

1) Use tools to uninstall all clip holders from the glass cover;
2) Take out the glass cover from the fitting;
3) Turn the reflector anti-clockwise to remove the reflector from the lamp;
4) Disconnect the COB wire/input wire carefully;
5) Remove the COB holder, then strictly follow the related documents to install new COB/reflector.
6) Connect the COB wire/input wire, check everything is correctly connected ;
7) Install the glass cover and replace all clip holders to the fitting.



Remark: make sure that all COB and reflectors are correctly installed.

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