

Vanguard LED Street Light Double-Coupling Modular IP68

Vanguard is not just a luminaire
it is

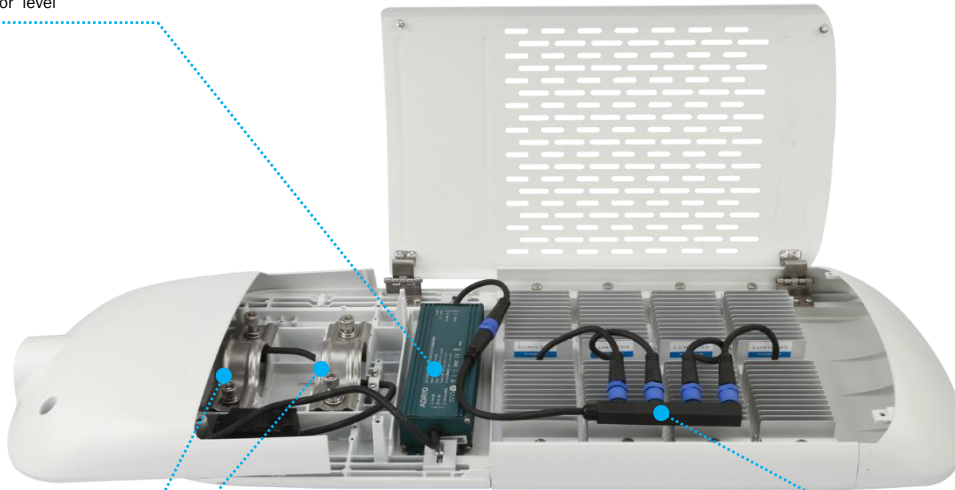
Quality, Durability, Beauty, Science, Patent, & Best Heat Dissipation System

Lifespan can reach 15 years of service



Design Features

LED Driver
10kV surge protector level

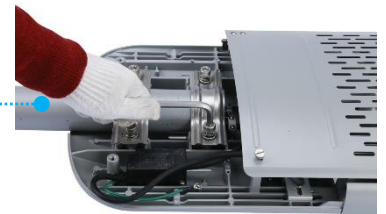


Patent IP68 rated connector



Mounting Brackets
With 4 x stainless steel screws

Pole diameter $\Phi 60 \pm 3 \text{mm}$
Installation depth $210 \pm 5 \text{mm}$



Patent IP68 rated LED light engine
IK10 Impact Protection Rating



Features

- Unique patented IP68 (highest protection level) LED light engines;
- Impact protection IK10 (highest impact protection level for the integrated PC & lens's);
- Ergonomic and dedicated lighting distributions available for various roadway applications;
- Whole structure heating dissipation design with best thermal conduction, radiation and convection;
- Flexible to reach desired power selections by choosing appropriate light engines;
- Tool-free on-site replacements of light engines greatly reduce maintenance cost;
- Unmatched lighting performance, driver stability and desirable lifespan.

GT11A Double-Coupling IP68 Modular LED Street Light



PIN UP
DESIGN AWARD
2011

Vanguard

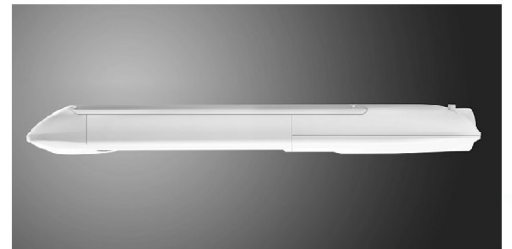


- White
- Black
- Silvery
- Blue





Built-in LED Driver Separate from LEDs



Side view of Modular Street Light

Vanguard T11A is an ultrathin, fashionable and technological LED streetlamp which makes skillful use of front and back end covers and middle proximate matter to flexibly adapt to different lighting demands and to maximize resources combined with modular lighting sets. The original honeycomb thermal design realizes pioneering heat management in the industry and enable the product to save energy and to protect environment based on the temperature drop by 20° centigrade. It has the unique characteristics of tool-free maintenance, safety, convenience and low maintenance cost.

Furthermore, it complies with grading design of human engineering and can reduce potential safety hazards of road. The waterproof and dustproof grade reaches IP68 and the service life is as long as 12 years

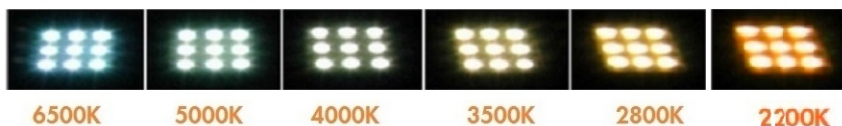


Driver

Heat Sinks



Double Coupling IP68 Connectors



6500K

5000K

4000K

3500K

2800K

2200K

Patent Design and Several Gold and Silver Awards and Prises



Silver Award



Gold Award



MOST SUCCESSFUL DESIGN AWARDS

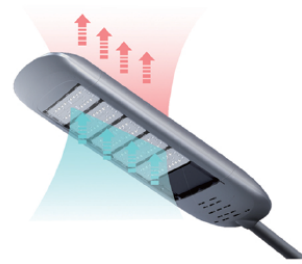


The Most Promising Enterprise

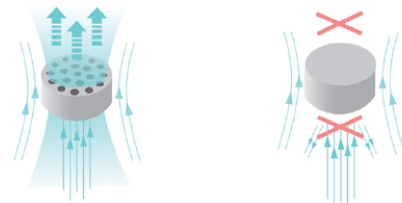
Vanguard Technical Advantages

► Heat Dissipation using Honeycomb Briquette effect

Honeycomb Briquette effect simulates and adopts the burning principle of honeycomb briquette; solid briquette burns slowly and inadequately due to the insulation of its center from outer air, the honeycomb structure enables the coal to burn fast due to air convection. The same concept was used in the design of VANGUARD LED Modular Street, Flood, Tunnel, and High bay Lights. We have transformed the original block of radiator to various modules to enable air to convect and fully pass through the gaps between modules by utilizing the honeycomb effect, thus to remove the heat rapidly, and reduce temperature by at least 20°C.



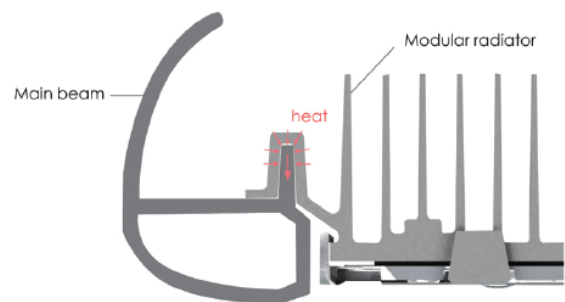
Schematic diagram of heat dissipation of honeycomb effect



air convection in Honeycomb Briquette No air convection in solid coal Briquette

► Heat dissipation of the whole structure

Another brilliant idea is to utilize the module bracket that only play a supporting role, and transform it to a "thermal bracket" that is capable of conducting module's heat to the light shell as a structural part, thus to promote the cooling effect of radiator of cooling module. The design aims to fully utilize the surface area of structural parts to get rid of heat to air.



The heat is transferred to the main beam, and thus the main beam can promote the heat dissipation of radiator.

► Tool-free maintenance

Use special structural design to achieve the manual disassembly and installation of lighting components, in consideration that the high-power lights are generally installed in higher operating environment, the operators require as few tools as possible for their convenience and security.



► Double-coupling IP68 protection

It adopts the screw-free structure to avoid the penetration of water vapor through the screw hole; its double silicon-rubber rings insulate LEDs with the outside environment completely, thus to eliminate any erosion to chips and PCB boards from outside.



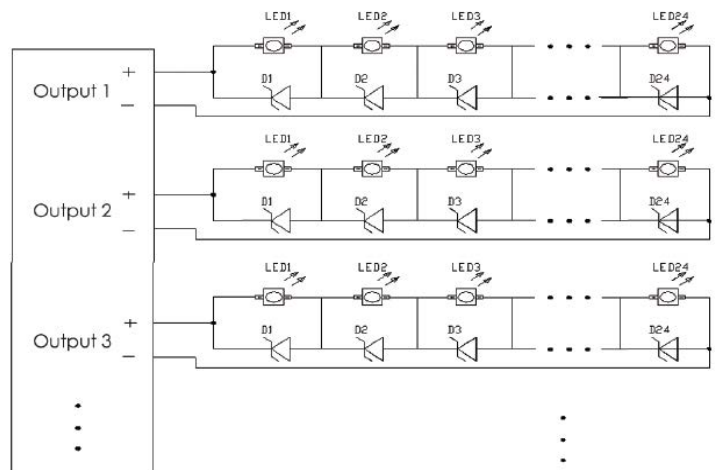
► Dye Penetrant Analysis

Dye penetrant analysis of the couplings. Besides test under water, the Dye pentrant is applied. We put the Modules into red boiling water for 30 minutes, and then suddenly put into normal water to test whether the red ink permeates the coupling of the Modules. Such test will be repeated 6 times in 3 hours to see up to what IP protection level the Modular will reach. Those consecutive tests prove that our Modules are perfectly IP68 protected.



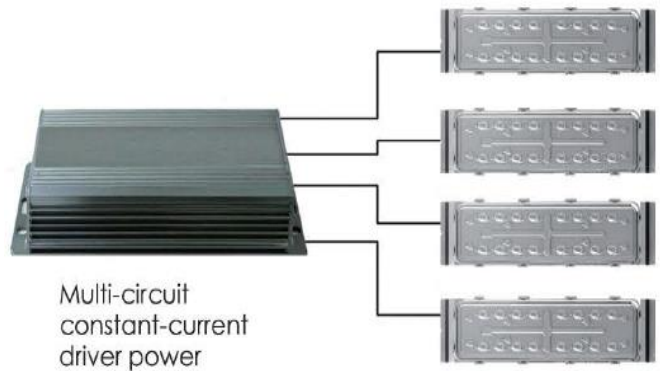
► "Ultra Robust" module technology

Each LED is equipped with bypass protection, to protect single-circuit structure of the full connection series, even open or short circuit fault cannot affect current and voltage distribution of other LED, the other LED can work under the normal operating mode, thus extending the life cycle of the whole module.



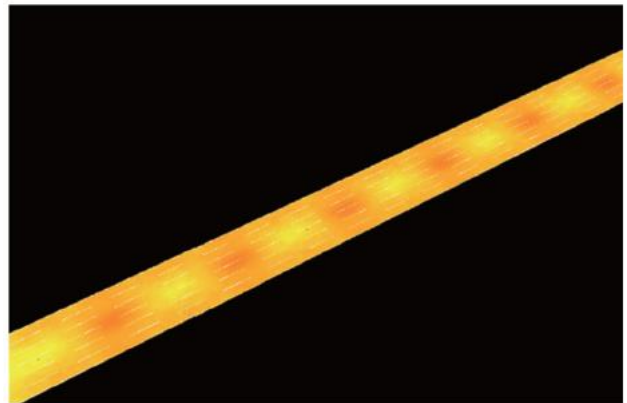
► **Multi-circuit constant-current driver power**

Independent multi-circuit constant-current output, each circuit is independently controlled; any failure in single circuit will not affect the normal working of other circuits. However, in single-circuit external LED driver, power supply is matched to LED electrical structure in series and parallel. But, differences among LEDs' VF values may cause an uneven current distribution, resulting in severe decay in part of LED units. If a single LED unit is damaged, the current distribution is more uneven in the entire series/parallel structure, which sharply increases damage rate of other LED units, and greatly shortens lifespan of the lights.



► **Ergonomic light distribution**

The light and color scheme of its products comply with road operators' visual habits. The products adopt equal-brightness optical design in full consideration that it is unavailable to detect illumination by eyes because human eyes are sensitive to brightness, thus not only eliminating the visual bright spots and dark spots on road surface, but also bringing visual ease and comfort to road operators, as well as improving lighting illumination and obtaining accurate detected values.



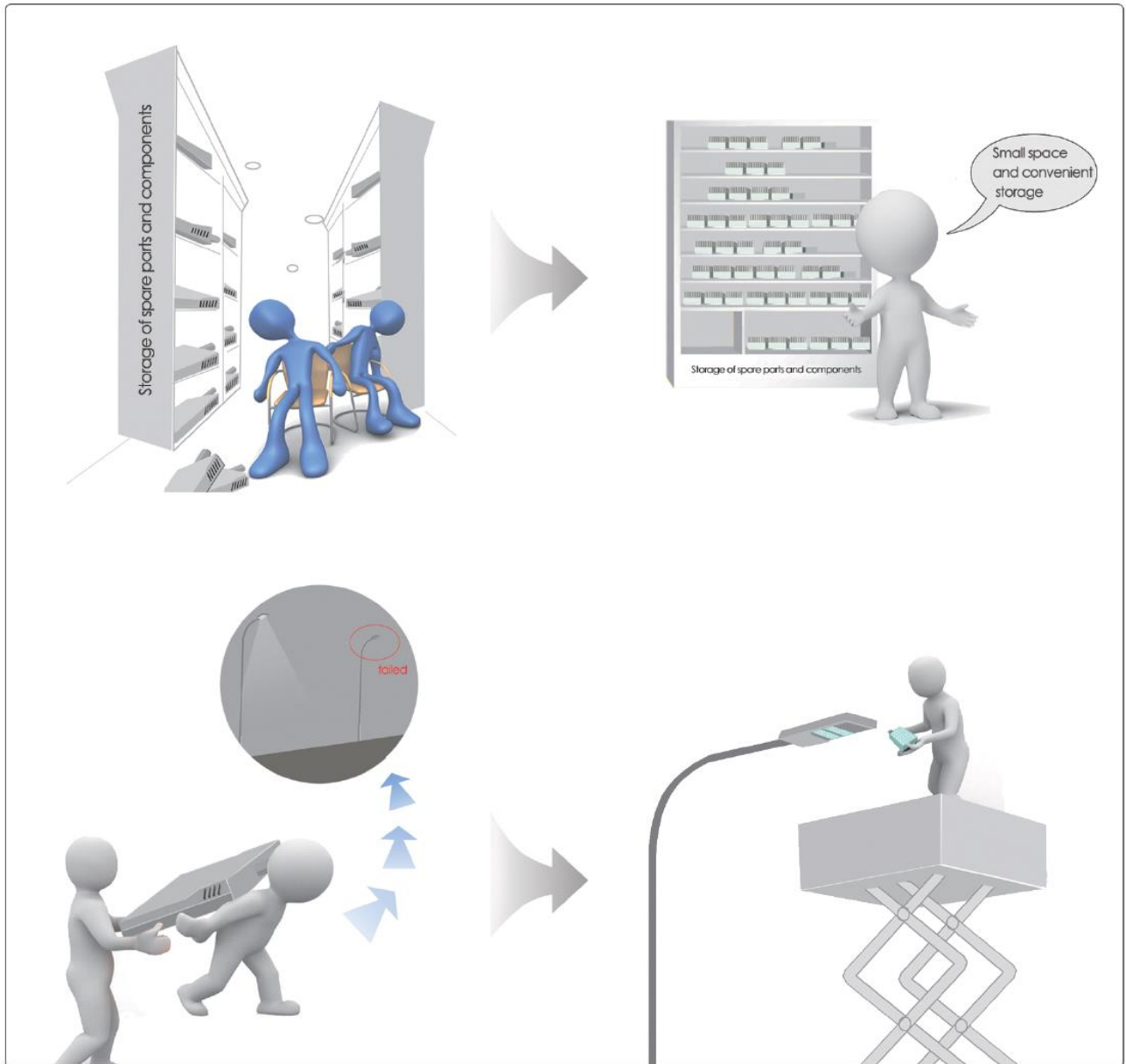
► **Free serialization**

It is available to freely equip with different number of modules to achieve different powers as required. Only change lens and get the light you want for different applications. Also, change the quantities of LED modules to get full range of power choices.



► Convenient operation on spare parts and components

Dealers or end customers only prepare much-small-sized powers and modules as the spare parts and components, both storage and replacements are very convenient, being different from traditional integrated-plate lights that require the whole light as spare part and is characterized by large storage space and inconvenient replacements.



General Performance of Vanguard LED Street Light

Model	Power (W)	5050 LEDs – 28pcs		5050 LEDs – 18pcs		3535 LEDs – 18pcs		3030 LEDs - 63pcs	
		Efficacy (lm/W)	Lumens (lm)	Efficacy (lm/W)	Lumens (lm)	Efficacy (lm/W)	Lumens (lm)	Efficacy (lm/W)	Lumens (lm)
GT11A-1	40	168	6,720	152	6,080	130	5,200	135	5,400
	50	163	8,150	145	7,250	122	6,100	130	6,500
	60	155	9,300	133	7,980	117	7,020	122	7,320
GT11A-2	80	175	14,000	160	12,800	137	10,960	140	11,200
	100	170	17,000	150	15,000	130	13,000	135	13,500
	120	163	19,560	140	16,800	122	14,640	127	15,240
GT11A-3	120	175	21,000	160	19,200	137	16,440	140	16,800
	150	170	25,500	150	22,500	130	19,500	135	20,250
	180	163	29,340	140	25,200	122	21,960	127	22,860
GT11A-4	160	175	28,000	160	25,600	137	21,920	140	22,400
	200	170	34,000	150	30,000	130	26,000	135	27,000
	240	163	39,120	140	33,600	122	29,280	127	30,480
GT11A-5	200	175	35,000	160	32,000	137	27,400	140	28,000
	250	170	42,500	150	37,500	130	32,500	135	33,750
	300	163	48,900	140	42,000	122	36,600	127	38,100
GT11A-6	240	175	42,000	160	38,400	137	32,880	140	33,600
	300	170	51,000	150	45,000	130	39,000	135	40,500
	360	163	58,680	140	50,400	122	43,920	127	45,720
GT11A-7	280	175	49,000	160	44,800	137	38,360	140	39,200
	350	170	59,500	150	52,500	130	45,500	135	47,250
	420	163	68,460	140	58,800	122	51,240	127	53,340
GT11A-8	320	137	43,840	140	44,800	160	51,200	175	56,000
	400	130	52,000	135	54,000	150	60,000	170	68,000
	480	122	58,560	127	60,960	140	67,200	163	78,240

*Above values are calculated based on the product with CCT over 3000K, values of 3000K are 5% lower than above values.

*Values shown are subject to ±5%~±8% tolerance.

Nominated powers based on TARSHID Road Configuration.

Model	Power (W)	Efficacy (lm/W)	Lumens (lm)
T11A-1	30	170	5,100
	45	160	7,200
	50	160	8,000
	60	150	9,000
T11A-2	70	150	10,500
	80	175	14,000
	90	160	14,850
	95	160	15,200
	100	160	16,000
	110	160	17,600
T11A-3	165	150	24,750
	180	150	27,000

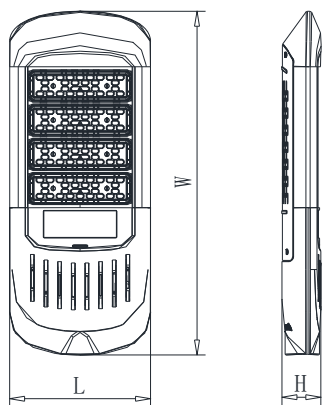
GT11A

LED Street Light

Dimensions

Model	L (mm)	W (mm)	H (mm)	Available Pole O.D. (mm)	Max. Installation Depth (mm)	N.W.* (kg)
GT11A-1	595	330	90	57~63	210	6.5
GT11A-2	645	330	90	57~63	210	8.0
GT11A-3	725	330	90	57~63	210	9.0
GT11A-4	805	330	90	57~63	210	10.5
GT11A-5	885	330	90	57~63	210	11.5
GT11A-6	1065	330	90	57~63	210	13.0
GT11A-7	1145	330	90	57~63	210	15.0
GT11A-8	1225	330	90	57~63	210	17.0

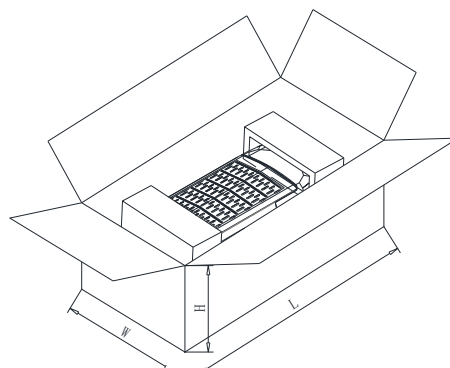
* Values shown are subject to ±5% tolerance.



Package Information

Model	L (mm)	W (mm)	H (mm)	G.W.* (kg)
GT11A-1	690	430	170	7.8
GT11A-2	740	430	170	9.3
GT11A-3	820	430	170	10.4
GT11A-4	900	430	170	12.0
GT11A-5	980	430	170	13.1
GT11A-6	1160	430	170	14.7
GT11A-7	1240	430	170	16.8
GT11A-8	1340	430	170	16.8

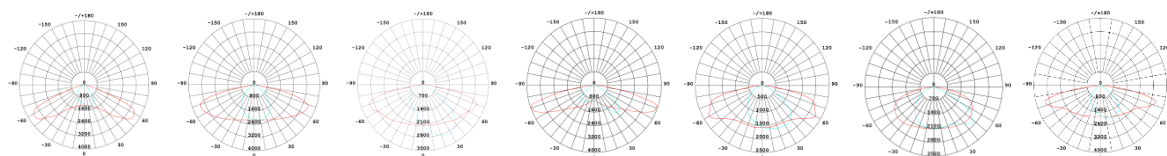
* Values shown are subject to ±5% tolerance.



Distributions

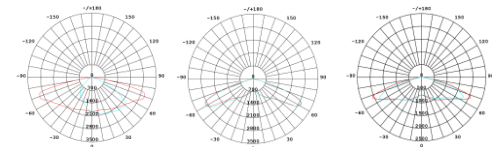


M16B
5050 LEDs



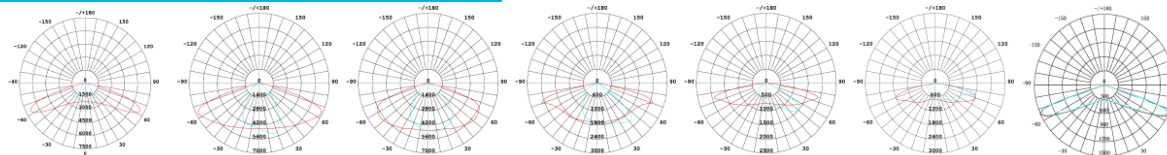
T1S1107 T2S2105 T2S2128 T2M2111 T2S3106 T3S1113 T3M2109

M1A
3535 LEDs

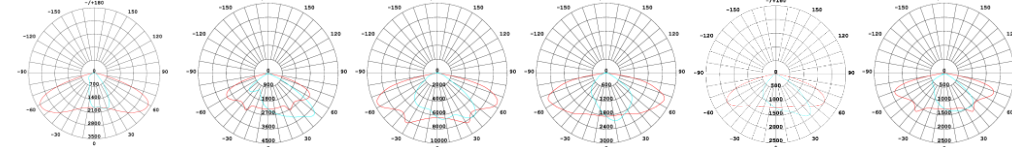


T3M2127 T5S2040 T5S2114

M8B
3030 LEDs



T1S3501 T1S3100 T2S1312 T2M3702 T3M3910 T4M5703 T5S3040



T1S5323 T2S1324 T2S2201 T2S2321 T2S5321 T3M1321

Accessories



Model	Available Adapter	Available Pole O.D.	Available Installation Depth
GT11A-1	PA2C	Φ57~63	≥80
GT11A-2	PA3C	Φ61-67	≥120
GT11A-3	PA3C	Φ61-67	≥120
GT11A-4	PA3C	Φ61-67	≥120
GT11A-5	PA3C	Φ61-67	≥120
GT11A-6	PA3C	Φ61-67	≥120
GT11A-7	/	/	/
GT11A-8	/	/	/

Version History

Change Date	Version	Item	Description of Change		
			From	To	
2019/05/22	Ver. 2.0	Datasheets release			

Ordering Information

Example: GT11A-2-100-M16B-VBA-18-2105-7040-CM-MO-GY

Luminary Type	Module Qty.	System Power	Module Type	Module Interface Type	LED Package	Cable Standard	LED Qty. per module																																							
GT Street light	1 1 modules	40 40W	M16B M16B module	V V-shaped groove	A 3535	A CCC+VDE	18 18pcs																																							
11A 11A series	2 2 modules	50 50W	M1A M1A module		B 5050	C PSE	28 28pcs																																							
	M8B M8B module		C 3030	H UL	63 63pcs																																							
	7 7 modules	420 420W				X OTHER																																								
Lens Code			CRI & CCT		Brand of LEDs		Driver Brand		Housing Colors																																					
1107 Type I Short	3501 Type I Short	5323 Type I Short	7030 Ra≥70, 3000K	LU LUMILEDS	IN INVENTRONICS	BK Black	WH White	BU Blue	GY Gray																																					
2105 Type II Short	3100 Type I Short	1324 Type II Short	7040 Ra≥70, 4000K								LN LUMINUS	MO MOSO	WH White	BU Blue	GY Gray																															
2128 Type II Short	1312 Type II Short	2201 Type II Short	7050 Ra≥70, 5000K														CM CUSTOMIZATION	XX OTHER	WH White	BU Blue	GY Gray																									
2111 Type II Medium	3702 Type II Medium	2321 Type II Short	7057 Ra≥70, 5700K																				XX OTHER	XX OTHER	WH White	BU Blue	GY Gray																			
3106 Type II Short	3910 Type III Medium	5321 Type II Short																											XX OTHER	XX OTHER	WH White	BU Blue	GY Gray													
1113 Type III Short	5703 Type IV Medium	1321 Type III Medium																																	XX OTHER	XX OTHER	WH White	BU Blue	GY Gray							
2109 Type III Medium	3040 Type V Square																																								XX OTHER	XX OTHER	WH White	BU Blue	GY Gray	
2127 Type III Medium																																														
2040 Type V				XX OTHER	XX OTHER	WH White	BU Blue	GY Gray																																						
2114 Type V										XX OTHER	XX OTHER	WH White	BU Blue	GY Gray																																
M16B, 5050 LEDs	M1A, 3535 LEDs	M8B, 3030 LEDs														XX OTHER	XX OTHER	WH White	BU Blue	GY Gray																										