### Professional energy-saving lighting integrated operators Smart city intensive solutions provider







#### **CECEP LatticeLighting Co.,ltd**

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Latticelighting.com

#### CECEP LATTICELIGHTING

CECEP Latticelighting Co.,Ltd. is China's leading integrated operator of LED energy saving lighting and provider of intensive smart city lighting solutions.



PROJECT SERVICE

CECEP Latticelighting Co.,Ltd. can provide the customer service from planning and design, financing, product technical selection, construction, operation and etc.

## **APPLICATIONS**

Flood Light Tunnel Light

PRODUCTS AND







#### **R&D CAPACITY**

Since its foundation, CECEP LatticeLighting has always been concerned about the innovations and breakthroughs in core technologies, and established a technological development system which is oriented to the market, based on the adaption to the global development of energy-based industries, and aimed at promoting scientific and technological achievements into industrial innovation. Strong R & D system provides a strong technical support for each product line.

#### **INTELLIGENT LIGHTING**

Basis on the information technology of cloud computing, Internet of Things, mobile internet and big data, it'll realize the information and intelligent management for the city street light and other public lighting, thereby enhancing the management efficient of city lighting, promoting the lighting rate of street light to facilitate people's travel, reducing the manual inspection and maintenance cost.

**PROJECT** 



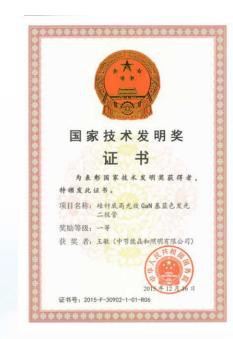
## **CECEP Latticelighting**

CECEP Latticelighting is a state-owned enterprise under China Energy Conservation and Environment Protection Group, which is the biggest technical service type industry in China Energy conservation area.

CECEP Latticelighting is a subsidiary of China Energy Conservation and Environment Protection Group(CECEP). Since 2014 year, it began to enterprise strategy transformation, from "LED lighting technology leading pacemaker" to "integrated operator of LED energy saving lighting and provider of intensive smart city lighting solutions".

The registered capital of the company is 100 million yuan. Currently it covers an area of 100 acres. And it is the first to promote the third LED technology route all over the world—LED lighting application enterprise of silicon substrate technology.

Latticelighting is the organizer of solid-state lighting state local engineering research center. And is the organization participation company of National silicon-based semiconductor lighting engineering technology research center.



The first prize of the State Technological Invention Award

### **CECEP**

## China's largest industrial group in environmental protection & energy saving

CECEP is China's only central state-owned enterprise engaged in the energy conservation, emissions reduction and environmental protection. Currently have 543 subsidiaries, among them, 27 secondary subsidiaries, 6 public companies, with business distribution covering more than 40 domestic provinces, cities and overseas countries and regions.

After recent years of development, CECEP completed the evolution, transformation and upgrading from the national policy investment company to professional group of industry. It build up the main business sectors with energy saving, environmental protection, clean energy and resources recycling, and "4 + 1" industry pattern strongly supported by energy conservation and environmental protection comprehensive service. It will become the science & technology service industry group with the strongest comprehensive strength in China energy conservation and environmental protection fields, which has the strong appeal, driving force and influence in this field.

At present, CECEP main business is in industrial energy saving, building energy conservation, solid waste treatment, flue gas treatment and heavy metal pollution, soil restoration, water treatment, photovoltaic power generation, wind power, energy conservation and environmental protection new materials, which proportion and strength are all in the leading position.



**Energy Saving** 



**Environmental Protection** 



Clean Energy









**Technology Innovation** 

Energy conservation and environmental protection comprehensive service

Resources Recycling



## **R&D** Capacity

Since its foundation, CECEP LatticeLighting has always been concerned about the innovations and breakthroughs in core technologies, and established a technological development system which is oriented to the market, based on the adaption to the global development of energy-based industries, and aimed at promoting scientific and technological achievements into industrial innovation. Strong R & D system provides a strong technical support for each product line.

In order to ensure that the import of the production of each product has a stable performance and qualified quality, the company is equipped with facilities for the experimental site. Each of the new products into production are rigorously tested including safety testing, environmental simulation test and the related basic lighting photoelectric comprehensive performance testing, material physical properties test, performance test, power supply.

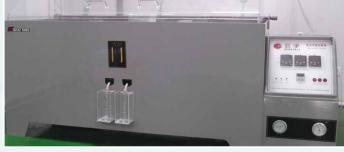














## Achievements in scientific research

First domestic enterprise put forward the modularization technique

The first domestic LED streetlight product in bulk shipment breaking 130 lm/w

The first domestic LED tunnel light product in bulk shipment breaking 125 lm/w

The first domestic outdoor lighting products being applied the plane optical lens.









## Certificate

ISO9001 quality management system certification
ISO14001 environment management system certification
UL ROSH DLC CE BIS certificate











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## **Project Service**

As a national significant energy service enterprise of China government, CECEP Latticelighting has global service ability including the full service covering systematic research, project planning, solution design, product selection, financing, unified purchase and whole-life service.

Join us to share the resources and opportunities based on various cooperation modes experience including PPP, BOT, EMC and etc.

## **EMC**

#### **EMC(Energy Management Contracting):**

An energy saving mechanism which energy-using units pay the investment and reasonable profits to energy saving Service Company with energy saving benefits.

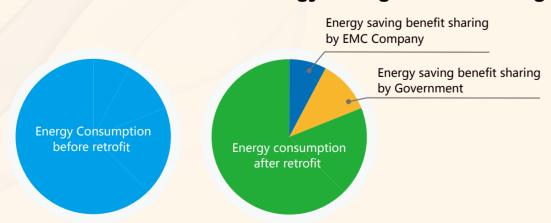
#### Energy-using units/government with none or not much pay.

Lattcelighting provide finiancing, construction, the government pay the electricity save cost to Latticelighting, and without any increase pay.

#### Energy-using units/government with no worry.

EMC service contracting duration, Latticelighting liable for lighting maintenance, and guarantee the products will conform to acceptance standard, the energy saving is the sole income, energy-using units/government bear no risk.

#### **EMC** – Energy saving benefit sharing



### **BOT**

BOT(build-operate-transfer), government issue a attorney agreement with a designate enterprise for certain infrastructure project. The granted enterprise undertake the project investment, financing, construction and maintenance, within the granted duration of agreement, permit the financing construction and operating designate public infrastructure facility, and grant clear the loan by charging from the user or selling products, recycle investment and make profits. Government has supervision right, control power. Concession period finished, enterprise transfer the infrastructure facility to government pay or no pay.

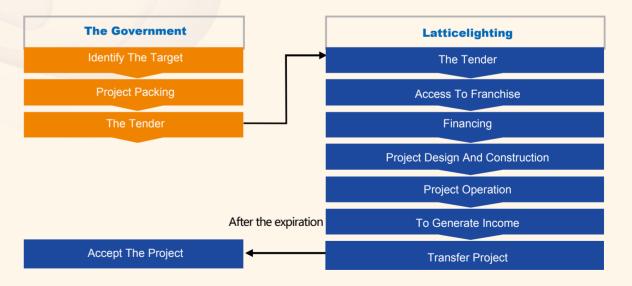
#### Decrease one lot financial expenditure.

Latticelighting only one lot invest the construction funds, government procure the service by installment.

#### Good for Project value maximum

**Optimize Project risk share** 

#### **BOT The Conceptual model**



## telligent Lighting

#### PPP

PPP Mode(Public-Private-Partnership), in public service area, government take a competitive approach, select a social capital with invest and operating management capability, and forming cooperation partnership relation, social capital invest, construction, manage public service, government pay the social capital according to the public service performance appraisal. PPP mode transfer part government liability to social entity (enterprise) by means of attorney operating right, government and social entity build the "benefit sharing, risk sharing, full cooperation" entity relationship, decrease the government financial burden and invest risk of social entity.

#### Decrease the financial expenditure pressure

LL afford the initial one-lot funds for project programming, designing, and construction, also responsible for the maintenance, operation, management, government pay by installment, one-lot financial expenditure with small pressure.

#### Decrease the cycle cost

According the service performance evaluation and investment profits, will minimize the product and operation cost through systematic programing, efficient management and high quality, and ultimately decrease the cycle cost.

#### Optimize the risk allocation

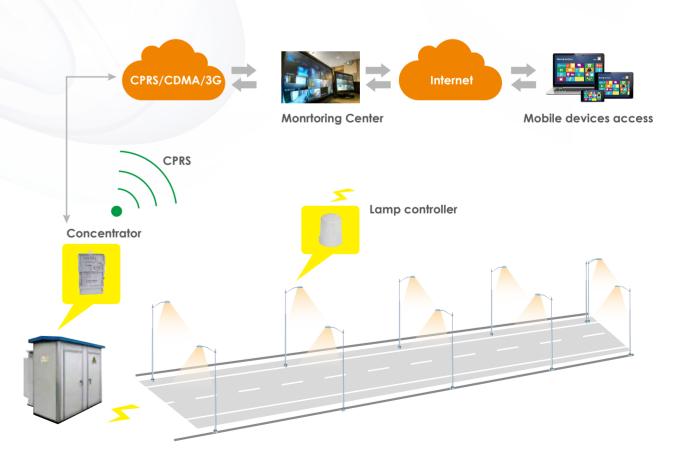
Government as the Supervisory party, only care the project quality and result, not bear the technology and fund risk, under the Public-Private-partnership, government exercise coordinating advantages, and make the project operation more efficient.

## The government department Provide guarantee and preferential policies The PPP mode project company Planning, constructure projects tion and operation Capital supply Public infrastructure projects

## **Intelligent Lighting**

Basis on the information technology of cloud computing, Internet of Things, mobile internet and big data, it'll realize the information and intelligent management for the city street light and other public lighting, thereby enhancing the management efficient of city lighting, promoting the lighting rate of street light to facilitate people's travel, reducing the manual inspection and maintenance cost.

- Intelligent lighting is based on the original LED lighting street light network and released more than half of its load redundancy;
- Under elaborate management, intelligent lighting is able to supply electricity all the day for the equipments in the lighting network;
- Street lights are in a high coverage in big streets and small lanes of the city,
   able to develop to be the best carrier for sensor and communication etc.



## Intelligent lighting + model in smart city

Cross-industry combination, Systematic planning, Accessible map, Safe management.



#### **Project case**



The urban intelligent lighting at Chaling county, Hunan province



The urban intelligent lighting at Chongzhou city, Sichuan Province



Intelligent Lighting on North Aixihu Road,Nanchang, Jiangxi province

The urban intelligent lighting at Chaling county, Hunan province

**Project content:** LED lighting modification and urban intelligent lighting construction in the whole county city

Operation mode: PPP

Operation period: 10 years

The urban intelligent lighting at Chongzhou city,Sichuan Province

Project content: LED lighting modification, intelligent lighting construction, new roads' LED intelligent lighting, smart city building was on the basis of smart lighting.

Operation mode: PPP

Operation period: 20years

Intelligent Lighting on North Aixihu Road,Nanchang, Jiangxi province

Project Content : Intelligent City Administration, Intelligent Lighting,Intelligent network

Operation Mode: Government

Procurement

## roducts and Applications

## Chaling PPP intelligent lighting retrofit project in Hunan province

We provided nearly 5000 LED street lights and maintenance services for landscape lighting upgrade of ten buildings. And the intelligent street lights will be connected with all kinds of smart functional sensors like wifi, environment supervisor and emergency alarm. The project operation period is within10 years.

#### **Features**

- Middle power NICHIA LED Chip.
- · Advanced modular technology.
- · Full power covered.
- · Great heat dissipation.
- · Dimming, photocell function, Intelligent remote control.
- · Supports adjustable angle, easy installation.
- Good thermal management and high luminous efficiency.

#### **Typical Applications**

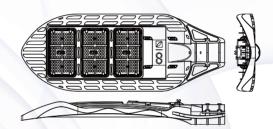
 Highway, Motorway stretches major road, Minor road, Footpath, Amenity area, Parking lot, Public lighting.



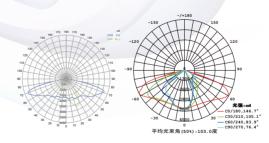
## **LED Street Light**



#### **Product Dimension**



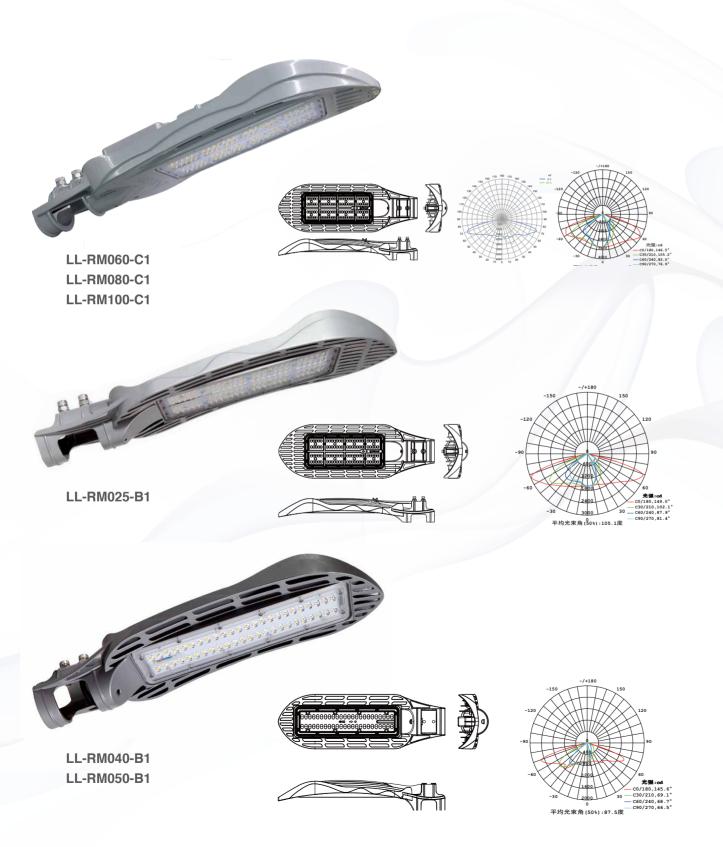
#### **Spectrum Chart**



#### **Description**

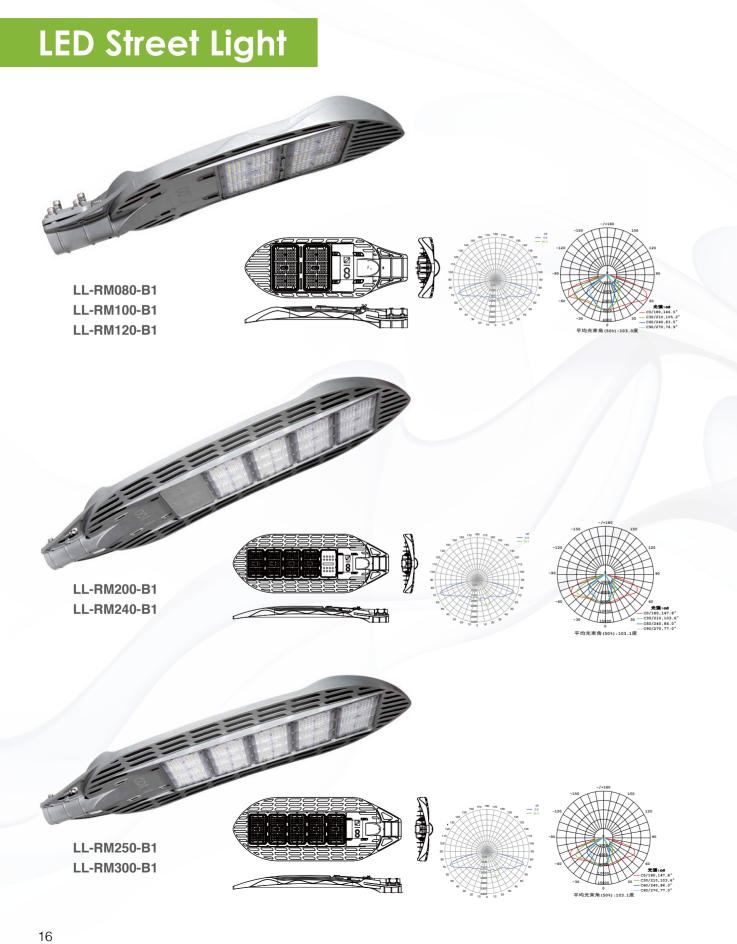
Model NO.		LL-RM150-B1、LL-RM180-B1	
	Power Consumption	150W/180W	
Electrical	Input Voltage	AC 100V ~ 277V AC 200V ~ 240V	
Licotrical	Power Frequency	>0.95	
	Power Supply Efficiency	91%	
	LED Chip Brand	NICHIA	
	Luminous Flux(Lumen Output)	18000lm / 20700lm	
Optical	Luminous Efficacy(WholeLamp)	120lm/w / 115lm/w	
	Correlated Color Temperature(CCT)	3000K-5000K	
	Color Rendering Index(CRI)	≥70	
	Ambient Operating Temperature	-35°C ~50°C	
Environmental	Ambient Operating Humidity	10~90%	
	Optimal Operating Temperature	18~24°C	
	Housing Material	Aluminum	
	Lens Material	Polycarbonate	
Mechanical	Mounting Options	Pole Mounting	
	IP Rating	IP65	
	Dimensions(L*W*H)(mm)	900*342*106.5	
	Dimensions(L*W*H)(mm)	963*403*199	
Packing	Net Weight(KG)	8.8	
Warranty		5Y	
		I	

## LED Street Light



#### **Description**

	Model NO.		LL-RM060-C1、LL-RM080-C1 LL-RM100-C1	LL-RM025-B1	LL-RM040-B1、LL-RM050-B1
		Power Consumption	60W/80W/100W	25W	40W/50W
	Electrical	Input Voltage	AC 200V~240V	AC 100V ~ 277V	AC 100V ~ 277V
	Liectrical	Power Frequency	>0.95	>0.95	>0.95
		Power Supply Efficiency	92%	87%	87%
		LED Chip Brand	NICHIA	NICHIA	NICHIA
		Luminous Flux(Lumen Output)	7200lm / 9200lm/12000lm	3000lm	5000lm / 6000lm
	Optical	Luminous Efficacy(WholeLamp)	120lm/w / 115lm/w/120lm/w	120lm/w	125lm/w / 120lm/w
		Correlated Color Temperature(CCT)	3000K-5000K	3000K-5000K	3000K-5000K
		Color Rendering Index(CRI)	≥70	≥70	≥70
		Ambient Operating Temperature	-35°C ~50°C	-35°C~50°C	-35°C~50°C
	Environmental	Ambient Operating Humidity	10~90%	10~90%	10~90%
		Optimal Operating Temperature	18~24°C	18~24°C	18~24°C
		Housing Material	Aluminum	Aluminum	Aluminum
		Lens Material	Polycarbonate	Polycarbonate	Polycarbonate
	Mechanical	Mounting Options	Pole Mounting	Pole Mounting	Pole Mounting
		IP Rating	IP65	IP65	IP65
		Dimensions(L*W*H)(mm)	651*237*103	462*151*85	600*207*93
	Packing	Dimensions(L*W*H)(mm)	712*328*169	648*558*236 6PCS/CTN	666*259*149
		Net Weight(KG)	4.8	1.6	3.2
	Warranty		5Y	5Y	5Y



#### **Description**

Model NO.		LL-RM080-B1、LL-RM100-B1 LL-RM120-B1	LL-RM200-B1、LL-RM240-B1	LL-RM250-B1、LL-RM300-B1
	Power Consumption	80W/100W/120W	200W/240W	250W/300W
Electrical	Input Voltage	AC 100V ~ 277V	AC 200V ~ 240V	AC 200V ~ 240V
Electrical	Power Frequency	>0.95	>0.95	>0.95
	Power Supply Efficiency	90.5%	92%	92%/93%
	LED Chip Brand	NICHIA	NICHIA	NICHIA
	Luminous Flux(Lumen Output)	10000lm / 12000lm / 13800lm	24000lm / 27600lm	30000lm / 34500lm
Optical	Luminous Efficacy(WholeLamp)	125lm/w / 120lm/w / 115lm/w	120lm/w / 115lm/w	120lm/w / 115lm/w
	Correlated Color Temperature(CCT)	3000K-5000K	3000K-5000K	3000K-5000K
	Color Rendering Index(CRI)	≥70	≥70	≥70
	Ambient Operating Temperature	-35°C~50°C	-35°C~50°C	-35°C ~50°C
Environmental	Ambient Operating Humidity	10~90%	10~90%	10~90%
	Optimal Operating Temperature	18~24°C	18~24°C	18~24°C
	Housing Material	Aluminum	Aluminum	Aluminum
	Lens Material	Polycarbonate	Polycarbonate	Polycarbonate
Mechanical	Mounting Options	Pole Mounting	Pole Mounting	Pole Mounting
	IP Rating	IP65	IP65	IP65
	Dimensions(L*W*H)(mm)	763*283*106.5	1200*453*129	1200*453*129
Packing	Dimensions(L*W*H)(mm)	828*343*199	1263*526*218	1263*526*218
. auking	Net Weight(KG)	6.2	14.3	14.5
Warranty		5Y	5Y	5Y

# Products and Applications

## Ningbo Seaport Lighting Retrofit Project

Total supplied 296sets of 400W floodlights.









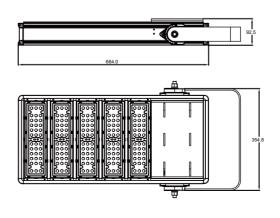
#### **Features**

- High power Cree LEDS.
- Energy saving up to 70%.
- Modular design for convenient dismantlement and repair.
- Secondary optical high transparent high boron silicon optical glass.
- · Airport can be used.
- Super long in lifetime, with 5 years warranty.

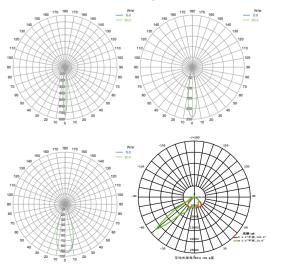
#### **Typical Applications**

• Apply for gas station, mine, plant, toll station, garage, storage, dock and more.

#### **Product Dimension**

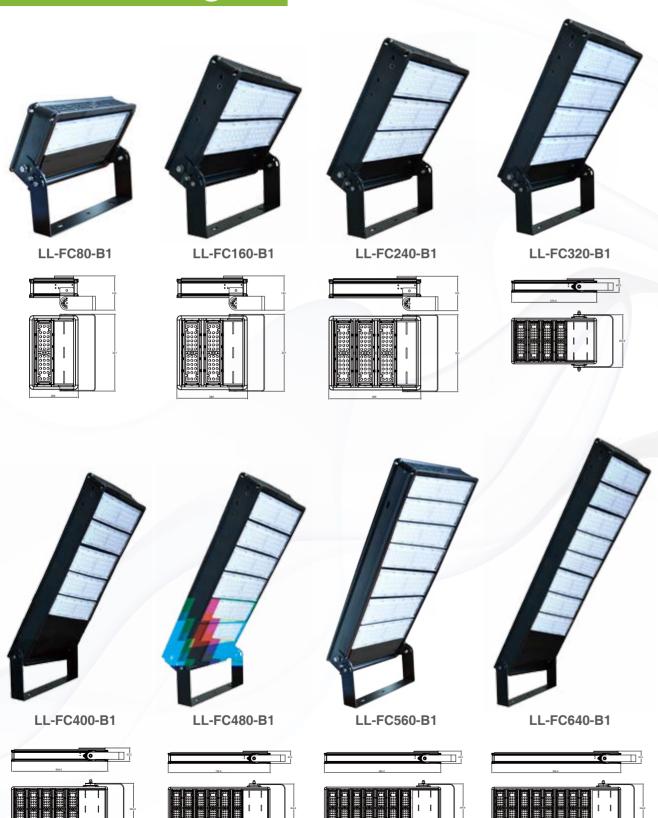


#### **Spectrum Chart**



# Products and Applications

## LED Flood Light



Model NO.		LL-FC080-B1	LL-FC160-B1	LL-FC240-B1	LL-FC320-B1	
	Power Consumption	80W	160W	240W	320W	
Electrical	Input Voltage	AC 100V~277V				
	Power Frequency	≥0.95				
	Power Supply Efficiency	90%	92%	92.5%	92%	
	LED Chip Brand	Cree			,	
	Luminous Flux(Lumen Output)	7200lm	14400lm	21600lm	28800lm	
Optical	Luminous Efficacy(WholeLamp)	90lm/w				
	Correlated Color Temperature(CCT)	3000-5000K				
	Color Rendering Index(CRI)	≥70				
	Ambient Operating Temperature	-35°C~50°C 10~90%				
invironmental	Ambient Operating Humidity	18~24°C				
	Optimal Operating Temperature	Aluminum				
	Housing Material	Polycarbonate				
	Lens Material	Wall Mounting				
Mechanical	Mounting Options	IP65				
	IP Rating					
	Dimensions(L*W*H)(mm)	204*321*134	294*321*134	384*321*134	574*355*93	
Packing	Dimensions(L*W*H)(mm)	388*288*189	388*388*189	478*388*189	778*438*154	
	Net Weight(KG)	3.7	5.1	8.7	9.9	
Warranty		5Y				
Model NO.		LL-FC400-B1	LL-FC480-B1	LL-FC560-B1	LL-FC640-B1	
	Power Consumption	400W	480W	560W	640W	
Flootvicel	Input Voltage	AC 100V~277V				
Electrical	Power Frequency	≥0.95				
	Power Supply Efficiency	92%	92.5%	92%	92%	
	LED Chip Brand		C	ree		
Ontical	Luminous Flux(Lumen Output)	36000lm	43200lm	50400lm	57600lm	

Model NO.		LL-FC400-B1	LL-FC480-B1	LL-FC560-B1	LL-FC640-B1	
	Power Consumption	400W	480W	560W	640W	
Electrical	Input Voltage	AC 100V~277V				
Electrical	Power Frequency	≥0.95				
	Power Supply Efficiency	92%	92.5%	92%	92%	
	LED Chip Brand	Cree				
	Luminous Flux(Lumen Output)	36000lm	43200lm	50400lm	57600lm	
Optical	Luminous Efficacy(WholeLamp)	90lm/w				
	Correlated Color Temperature(CCT)	3000K-6000K				
	Color Rendering Index(CRI)	≥70				
	Ambient Operating Temperature	-350~500				
invironmental	Ambient Operating Humidity	10~90%				
	Optimal Operating Temperature	18~240				
	Housing Material	Aluminum				
	Lens Material	Polycarbonate				
Mechanical	Mounting Options	Wall Mounting				
	IP Rating	IP65				
	Dimensions(L*W*H)(mm)	658*355*93	748*355*93	838*355*93	928*355*93	
5	Dimensions(L*W*H)(mm)	868*438*154	958*438*154	1048*438*154	1138*438*154	
Packing	Net Weight(KG)	18	18	21	24	
Warranty		5Y				

# Products and Applications

## The western Hubei LED tunnel light retrofit project of Huyu Expressway

The western Hubei LED tunnel light retrofit project of Huyu Expressway is an important project in Hubei Province, is the largest EMC lighting project in the national highway system, the transformation of the tunnel has a total of 42 seats, a total construction area of more than 300 km span. CECEP Latticelighting provide about 45 thousand of tunnel lights including 50W, 80W, 160W, 180W.



## **LED Tunnel Light**



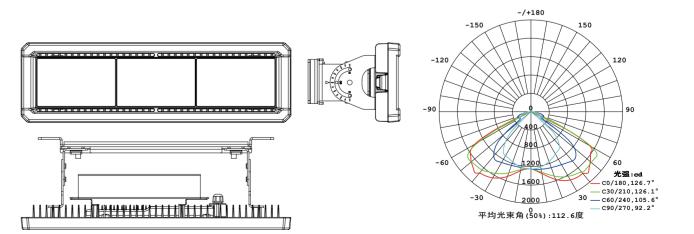
#### **Features**

- · Middle power NICHIA LED Chip.
- · Modular design, easy to install & maintain.
- Energy saving up to 70%.
- · Convenient to adjust the lighting angle.
- · Light control and time-phase dimming, further save energy.
- Die-casting and aluminum body, surface with static plastic coating and anti-corrosive treatment.

#### **Typical Applications**

Tunnel, Public lighting

#### **Product Dimension**

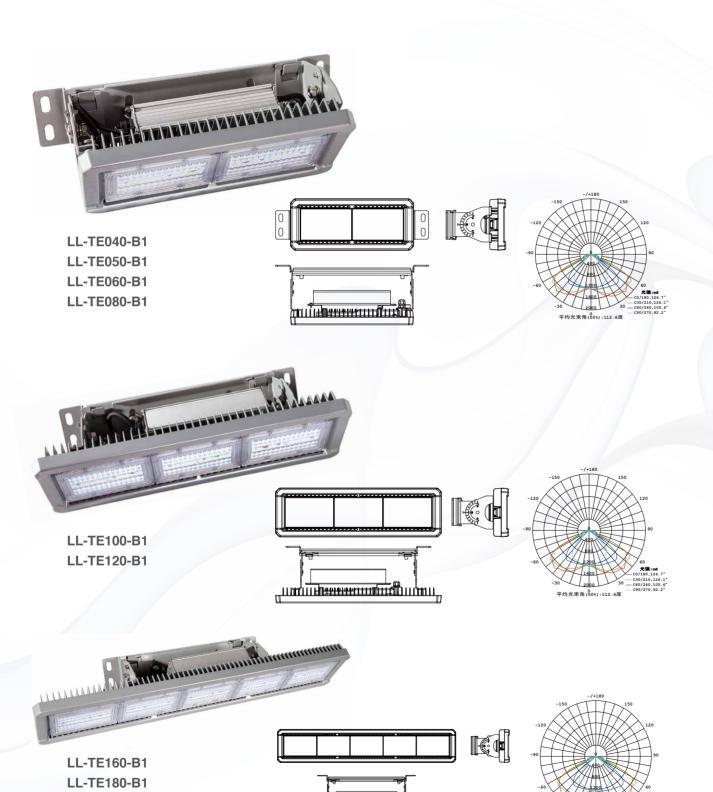


#### **Spectrum Chart**

LL-TE200-B1

24

## LED Tunnel Light



#### **Description**

	Model NO.		LL-TE040-B1、LL-TE050-B1 LL-TE060-B1、LL-TE080-B1	LL-TE100-B1、LL-TE120-B1	LL-TE160-B1、LL-TE180-B1 LL-TE200-B1	
		Power Consumption	40W/50W/60W/80W	100W/120W	160W/180W/200W	
	Electrical	Input Voltage	AC 100V ~ 277V	AC 100V ~ 277V	AC 100V ~ 277V	
	Electrical	Power Frequency	≥0.95	≥0.95	≥0.95	
		Power Supply Efficiency	90%	90.5% / 92%	92%	
		LED Chip Brand	NICHIA	NICHIA	NICHIA	
		Luminous Flux(Lumen Output)	4800lm/5500lm/6600lm/8800lm	11000lm/13200lm	17600lm/19800lm/22000lm	
	Optical	Luminous Efficacy(WholeLamp)	120lm/w/110lm/w/110lm/w/110lm/w	110lm/w / 110lm/w	110lm/w	
		Correlated Color Temperature(CCT)	3000K-5000K	3000K-5000K	3000K-5000K	
		Color Rendering Index(CRI)	≥70	≥70	≥70	
		Ambient Operating Temperature	-35°C~50°C	-35°C~50°C	-35°C~50°C	
	Environmental	Ambient Operating Humidity	10~90%	10~90%	10~90%	
		Optimal Operating Temperature	18~24°C	18~24°C	18~24°C	
		Housing Material	Aluminum	Aluminum	Aluminum	
		Lens Material	Polycarbonate	Polycarbonate	Polycarbonate	
	Mechanical	Mounting Options	Wall Mounting	Wall Mounting	Wall Mounting	
		IP Rating	IP67	IP67	IP67	
		Dimensions(L*W*H)(mm)	385*130*150	440*130*150	700*130*150	
	Packing	Dimensions(L*W*H)(mm)	491*188*184	491*188*184	753*188*184	
	Lacking	Net Weight(KG)	3.7	4.9	5.7	
	Warranty		5Y	5Y	5Y	

## **Project**

- Greece LLRA36 Street Lighting Project
- New Delhi Stadium Lighting Project
- Chile Solar Energy Street Light Project
   Tunnel Light, Taishun EMC Lighting Retrofit Project
- Nanchang Both Sides River Bank Landscape Lighting Project
- Shanghai Donghai Bridge Lighting Project
   Hunan Chaling PPP Smart Lighting Upgrade Project

- Tunnel Light, Hubei Exi High Speed Way EMC Project
  Guangzhou Nansha EMC Lighting Retrofit Project

- Ningguo EMC Lighting Retrofit Project
   Nanchang Both Sides River Bank Landscape Lighting Project
- Nanchang Bayi Avenue Lighting Project
   Industrial Park Smart Lighting Project































## **Project**













