

# 20W high power led

1. High light brightness arrives 1,200lm-1,800lm
2. Low light attenuation
3. Long operating life up to 50,000hs
4. High color rendering
5. Flare with well-balanced
6. wide viewing angle up to 140 degree
7. good for automotive exterior and interior lighting, Architectural lighting

## Specification

Item No	Lens Color	Emitting color	Current (mA)	Forward Voltage(V)	Viewing Angle(deg.)	Dominant Wavelength(nm)	Luminous Flux(lm/W)
FZ-P020SWEX-XXXTC	Water clear	Pure white	1400	16-18	140	5500-8000	60-90
FZ-P020WWEX-XXXTC	Water clear	Warm white	1400	16-18	140	2300-5500	60-90
FZ-P020BHEX-XXXTC	Water clear	Blue	1400	16-18	140	450-475	15-40
FZ-P020GHEX-XXXTC	Water clear	Green	1400	16-18	140	490-530	60-90
FZ-P020AYEX-XXXTC	Water clear	Yellow	1400	10-14	140	585-595	30-60
FZ-P020OREX-XXXTC	Water clear	Red	1400	10-14	140	620-630	30-40
FZ-P020IREX-XXXTC	Water clear	Infrared	1400	6-12	140	835-945	/

## 1. AbsoluteMaximumRatings

(Ta=25°C)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	IF	1400	mA
Pulse Forward Current	IFP	1500	mA
Allowable Reverse Current	IR	10	uA
Power Dissipation	PD	1	W
Operating Temperature	Topr	-30~+85	°C
Dice Temperature	Tstg	-40~+100	°C
Soldering Temperature	Tsod	260	°C

✧ IFP Conditions : Pulse Width ≤10msec. and Duty ≤1/10

✧ Soldering Time : ≤5 sec.

## 2. Electrical/OpticalCharacteristics

(Ta=25°C)

Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	IF=1400[mA]	16.0		18.00	V
Allowable Reverse Current	IR	VR=5[V]	0		10	uA
Luminous Flux	Φ <sub>v</sub>	IF=1400[mA]		1200	1800	lm

			]				
Temperature Color	TC	IF=1400[mA]	]	6500		7500	K
Chromaticity Coordinate	x	-	IF=1400[mA]		0.45		
	y	-	IF=1400[mA]		0.40		
Viewing Angle	2θ1/2	IF=1400[mA]	]		140		

- ✧ Please refer to CIE 1931 chromaticity diagram
- ✧ Viewing Angle Measurement allowance is ±5%

### 3. Ranking

(Ta=25°C)

Item	Symbol	Condition	BIN CODE	Min	Max	Unit
Forward Voltage	VF	IF=1400[mA]	E	16	17	V
			F	17	18	
Luminous Flux	Φv	IF=1400[mA]	P	1200	1400	lm
			Q	1400	1600	
			R	1600	1800	

- ✧ Forward Voltage Measurement allowance is ±3%
- ✧ Luminous Intensity Measurement allowance is ±10%

### 4. Typical Electrical Optical Characteristics Curves((Ta=25°C Unless Otherwise Notes)

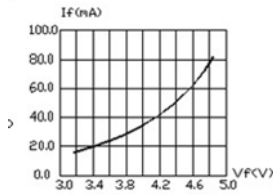


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE

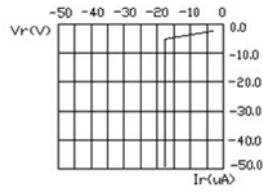


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE

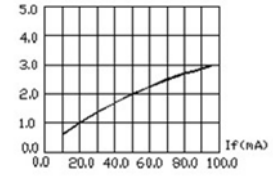


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

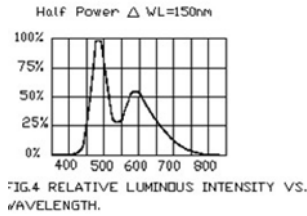


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

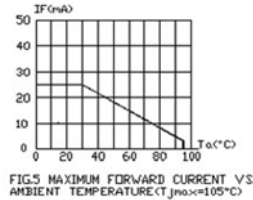
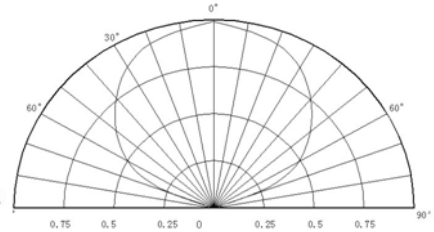
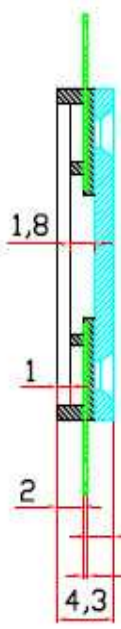
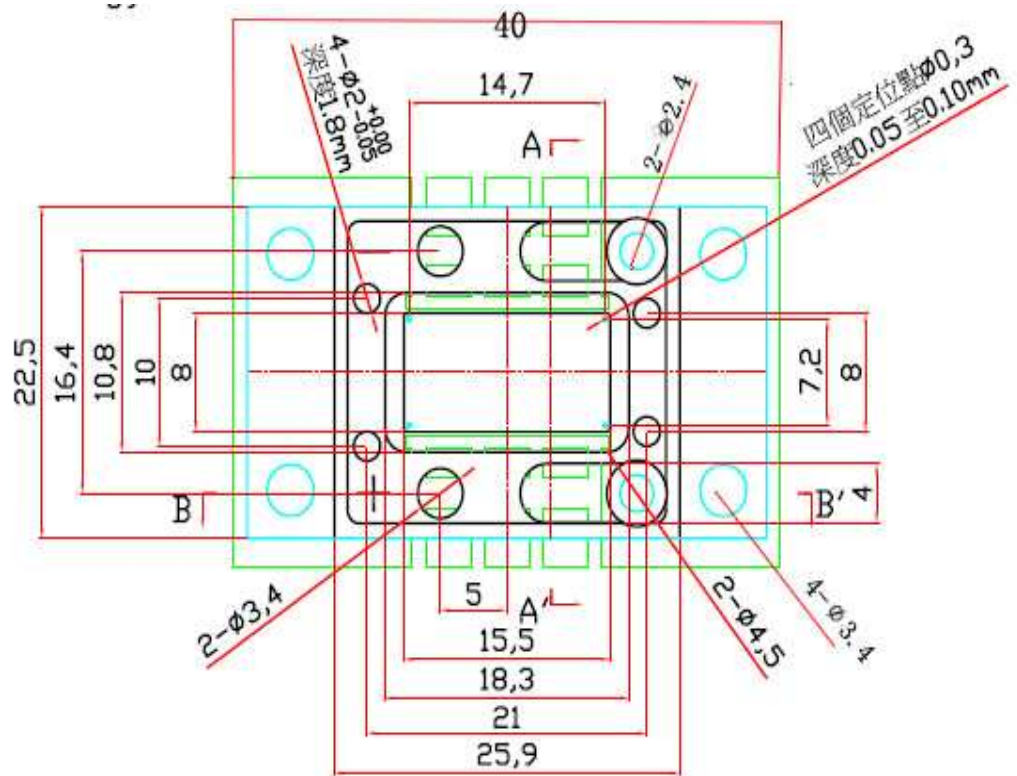


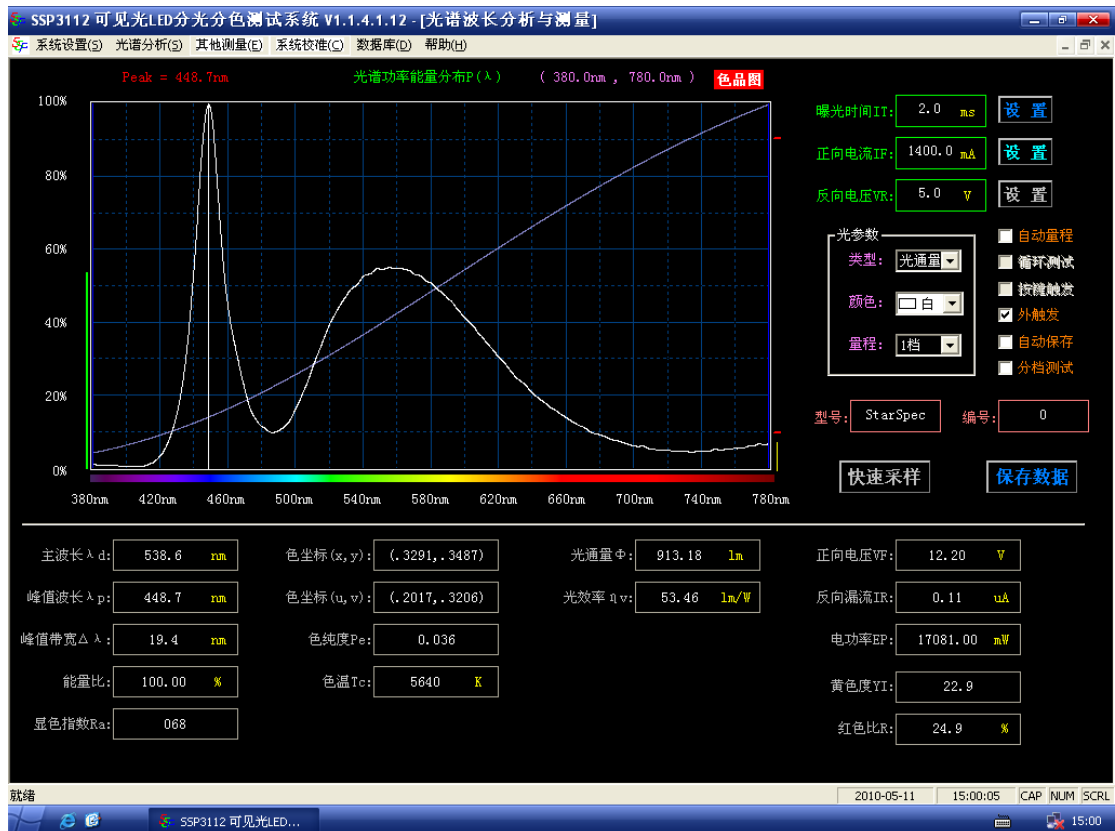
FIG.5 MAXIMUM FORWARD CURRENT VS. AMBIENT TEMPERATURE(T<sub>max</sub>>105°C)



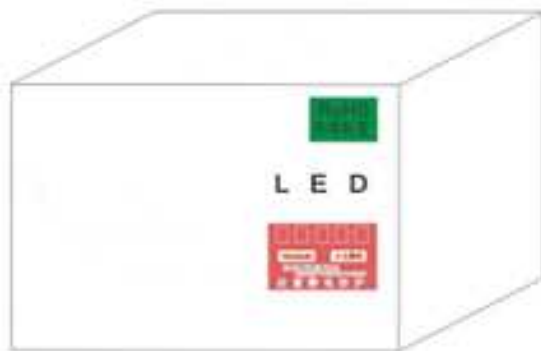
## 5. Lens Dimensions(mm)



## 6. Tested Lumens Data



## 7..Packing Measurement



Carton Packing

## NOTES:

1. Dimensions are in mm.
2. There are 50pcs emitters in a inner cardboard
3. There are three kind of cartons: 0.5k,1k,2k
4. A pc emitter to a shockproof particular plastics bag

## 8.Application:

- Reading lights
- Portable flashlight
- Up-lights and Down-lights
- General lights
- Contour lights
- Ceiling lights
- Garden lights
- Streetlights
- Mining lights
- Decoration lights
- Architectural lighting

