МОЩНЫЙ СВЕТОДИОД ARPL-31W-TFA-1919-90

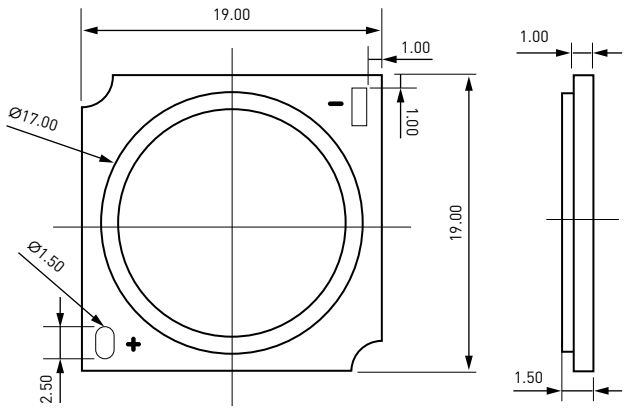
FEATURES

- 2700K, CRI90, 130–140 lm/W
- For indoor general lighting: spotlights, track lights, downlights
- For Industrial lighting: floodlight, hight bay light, streetlight
- Low thermal resistance
- RoHS and REACh compliant

SUPERIORITY

- High brightness and light efficiency.
- High color saturation.
- Easy to use with solar and wind energy saving systems.
- Enhanced optical control.
- Greatly reduce the thermal resistance of the light source, improve the weather resistance quality of the light source.
- Reduce the cost of use.
- Reduce maintenance costs.
- No environmental disposal issues.

MECHANICAL DIMENSION



Notes:
1. All dimension tolerance is ±0.2mm unless otherwise noted.

ABSOLUTE MAXIMUM RATINGS

Item	Symb.	Min.	Typ	Max.	Unit
Power	P	–	31	36	W
Forward Voltage	VF	33	35	37	V
Forward Current	I_F	–	830	960	mA
Operating Temperature	TC	–40	–	85	°C
Junction Temperature	T_J	–	–	125	°C
Storage Temperature	T_{STG}	–40	–	105	°C
ESD Sensitivity	ESD	–	–	2000	V
Reverse Voltage	VR	Reverse testing is not allowed			/
Reverse Current	IR			5	uA
Soldering Temperature	T_{SLD}			350 °C/3–5sec	°C/S

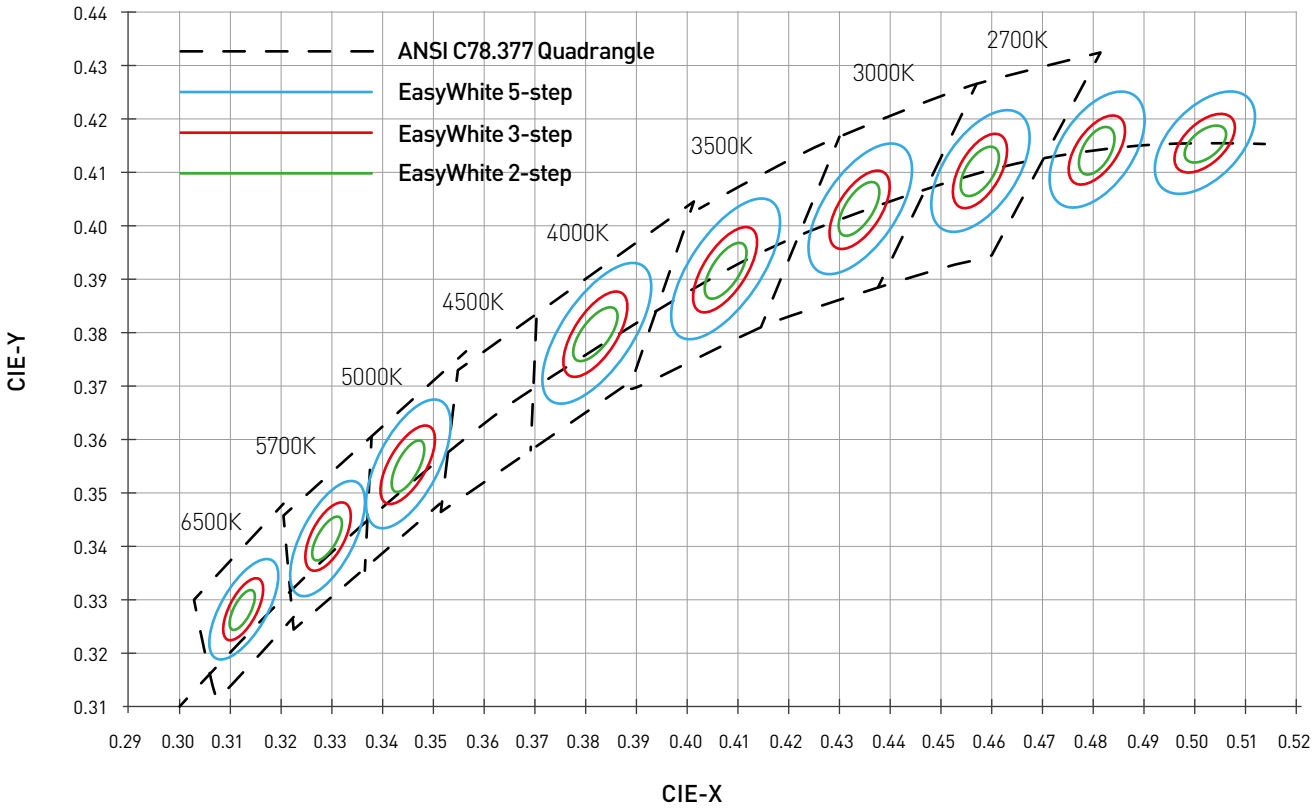
Max power and positive current mean the maximum setting value of the bottom temperature of led light source by using the appropriate heat sink.
Connection error and off-limits voltage may damage LED chip.

ELECTRO-OPTICAL CHARACTERISTICS AT T_j=25 °C

Product	RA	CCT	Luminous Flux (lm) 670mA	Efficacy (lm/W) 670mA	Voltage (V) VF670mA	Part Number
ARPL-31W-TFA-1919-Warm2700-90 (36v, 830 mA)	90	2700	3900–4200	130–140	33–37	TP1-1917B-1206P5-H27A0

Testing environment temperature 25 °C, and CCT and voltag e will changed if tested in different current and environment temperature.
Tolerance among different testing machine: Voltage:±0.1V, Lumen±5%, CRI±2, Color coordinate ±0.005.

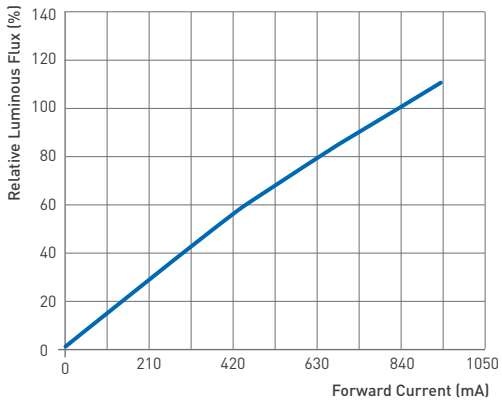
THE REFERENCE MAP COLOR AREA



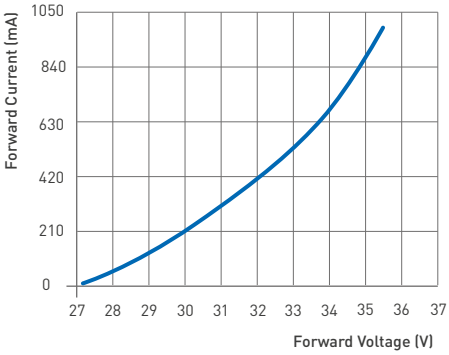
Nominal CCT	Center Point		MAJOR AXIS (a , b)			Ellipse Rotation
	X	y	2-Step	3-Step	5-Step	
2700 K	0.4578	0.4101	(0.0054, 0.0028)	(0.0081, 0.0042)	(0.0135, 0.007)	53.7

CHARACTERISTIC CURVES

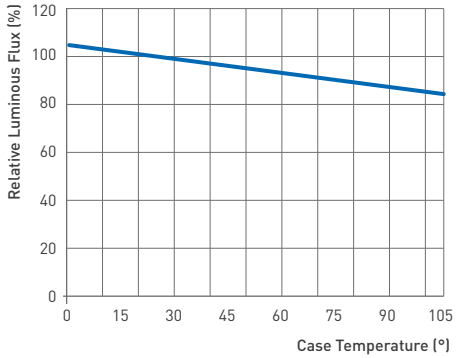
Relative Luminous Flux vs Forward Current



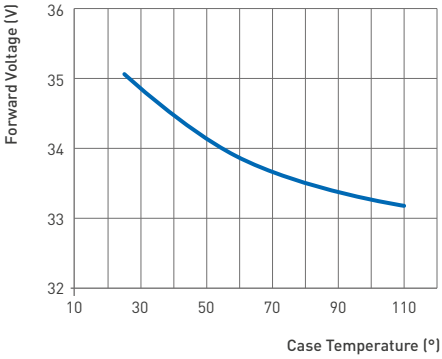
Forward Current vs. Forward Voltage



Relative Luminous Flux vs. Case Temperature

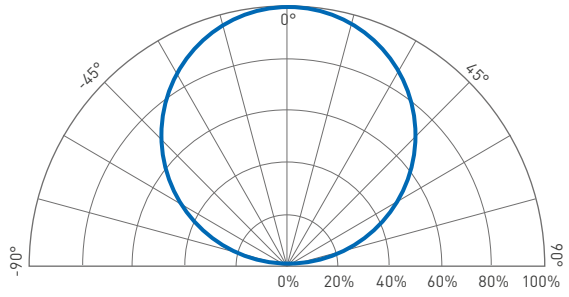


Forward Voltage vs. Case Temperature

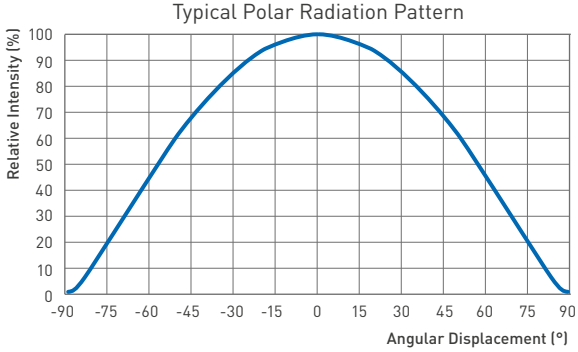


OPTICAL CURVES

Typical Spatial Radiation Pattern

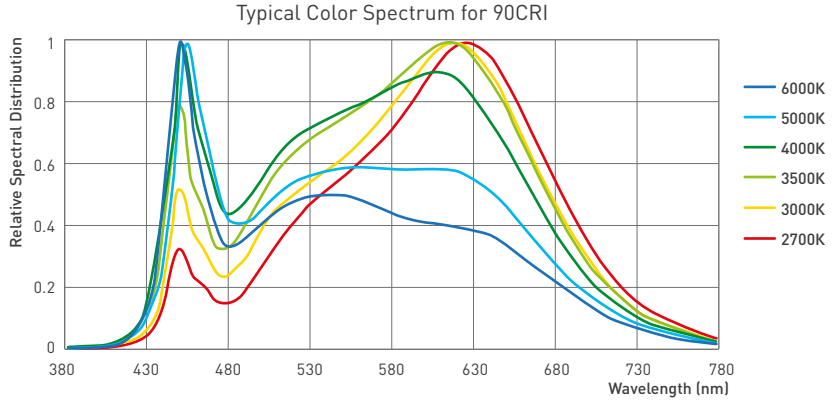


Typical Polar Radiation Pattern



Typical viewing angle is 120°. The viewing angle is defined as the off axis angle from the center line where intensity is ½ of the peak value.

Typical Color Spectrum for 90CRI



1. Color spectra measured at nominal current for Tj = Tc = 25 °C.
2. Color spectra shown is 2700K and 6000K with CRI90.

RELIABILITY TEST

Test Item	REF. Standard	Test condition	Sample quantity	Failure quantity
Thermal Shock	**JESD22-A104E**	**–40 ˚C (15min) ~ 120 ˚C (15min), 200 cycles**	**22**	**0**
High Temperature Storage	**JESD22-A103D**	**Ta=100 ˚C, 1000h**	**22**	**0**
Low Temperature Storage	**JESD22-A119**	**Ta=–40 ˚C, 1000h**	**22**	**0**
Temperature, High Humidity, Aging Test	**JESD22-A101C**	**Ta=85 ˚C, RH>=85%, IF=830mA 1000h**	**22**	**0**
High-temperature operation	**IES LM80-2015**	**Ta=105 ˚C, IF=830mA 1000h**	**22**	**0**
Low temperature operation	**JESD22-A108D**	**T=40 ˚C, IF=830mA 1000h**	**22**	**0**
Moisture/Reflow Sensitivity Test	**J-STD-020E**	**Precondition: 60 ˚C, 60%RH, 168H Tsld=260 ˚C. 10sec. 3 Reflows**	**22**	**0**