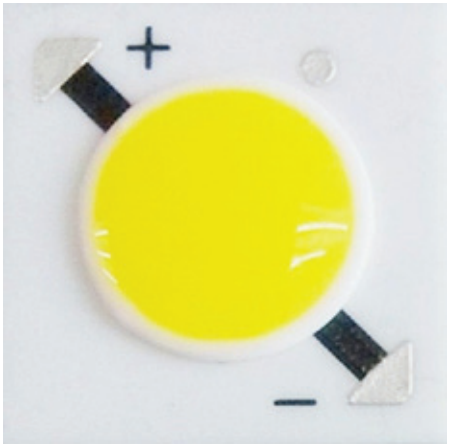
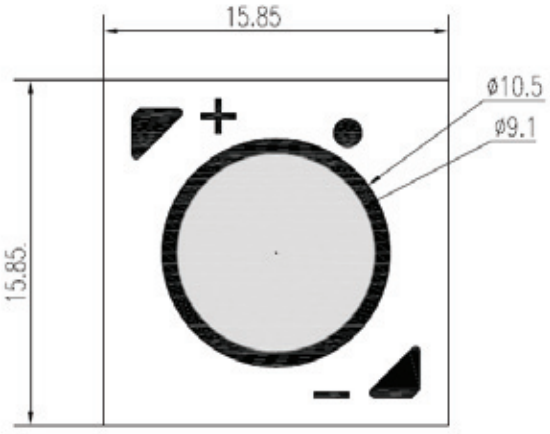
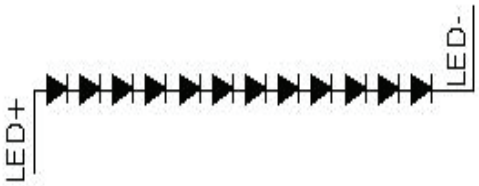
SPECIFICATION TE-R11-3 SERIES

1. PRODUCT APPEARANCE



2. OUTLINE DRAWING





Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01”) unless otherwised noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
TE-R11-3	InGaN	White	Yellow Tint	120°

PERFORMANCE PARAMETERS - ABSOLUTE MAXIMUM RATINGS (TA=25°C)

ITEM	SYMBOL	RATING	UNIT
Power Dissipation	P	3.56	W
Forward Current	I_F	90	mA
Reverse Voltage	V_R	60	V
Operating Temperature	T_{opr}	- 30 ～ + 80	℃
Storage Temperature	T_{stg}	- 40 ～ + 100	℃
Junction Temperature	T_{jmax}	+ 125	℃
Thermal Resistance	RJ-C	3.5	℃/W

ELECTRICAL-OPTICAL CHARACTERISTICS

(T_a=25℃)

**		PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
common		Forward Voltage *1	V_F	I_F=80mA	34.8	36	39.6	V
		Beam Angle	—		—	120	—	Deg
W	**	Color Temp.	—	I_F=80mA	2870	3045	3220	K
	**	Color Rendering Index *3	Ra		70	—	—	—
	W 1	Luminous Flux *2	Φ		259	274	—	lm
		Luminous Efficiency	η		90	95	—	lm/W
	W 2	Luminous Flux *2	Φ		288	305	—	lm
		Luminous Efficiency	η		100	106	—	lm/W
D	**	Color Temp.	—	I_F=80mA	4745	5028	5311	K
	**	Color Rendering Index *3	Ra		70	—	—	—
	D 1	Luminous Flux *2	Φ		288	302	—	lm
		Luminous Efficiency	η		100	105	—	lm/W
	D 2	Luminous Flux *2	Φ		317	331	—	lm
		Luminous Efficiency	η		110	115	—	lm/W
C	**	Color Temp.	—	I_F=80mA	6020	6530	7040	K
	**	Color Rendering Index *3	Ra		70	—	—	—
	C 1	Luminous Flux *2	Φ		302	317	—	lm
		Luminous Efficiency	η		105	110	—	lm/W
	C 2	Luminous Flux *2	Φ		331	346	—	lm
		Luminous Efficiency	η		115	120	—	lm/W

(Note) Parameters is formulated based on shipping samples

*1. After 20ms drive, measurement tolerance: ±3%
*2. Monitored by ChromeLED 1m integrating sphere, after 20ms drive, measurement tolerance: ±10%.
*3. Monitored by ChromeLED 1m integrating sphere, after 20ms drive, measurement tolerance: ±2

RELIABILITY

TEST ITEMS AND TEST CONDITIONS

NO.	TEST ITEM	TEST CONDITIONS	RESULT
1	Continuous operation test	T_a = 25℃, I_F = 80mA × 1000 hours(with Al fin)	PASS
		T_a = 80℃, T j≒120℃, I_F =80mA × 1000 hours(with Al fin)	
2	Low temperature storage	T_a =-40℃×1000 hours	PASS
3	High temperature storage	T_a =100℃×1000 hours	PASS
4	Moisture resistance	T_a =60℃, 90%RH for 1000 hours	PASS
5	Thermal shock	T_a =-40℃×30minutes～100℃×30minutes, 100 cycle	PASS

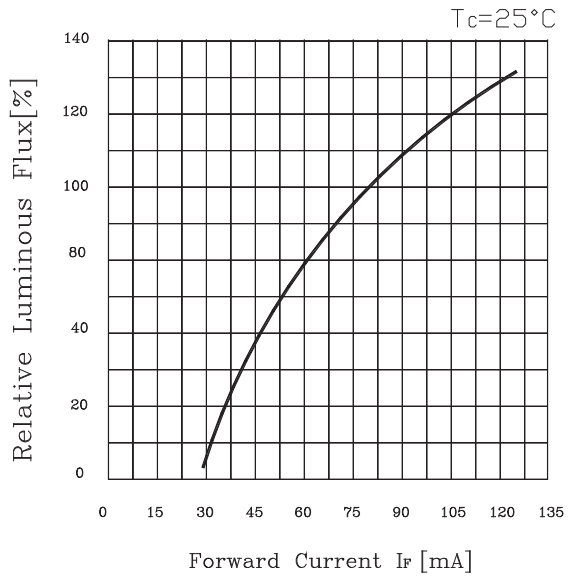
FAILURE CRITERIA

NO.	PARAMETER	SYMBOL	FAILURE CRITERIA
1	Forward Voltage	V_F	V_F ＞ Initial value × 1.1
2	Luminous Flux	Φ	Φ ＜ Initial value × 0.7

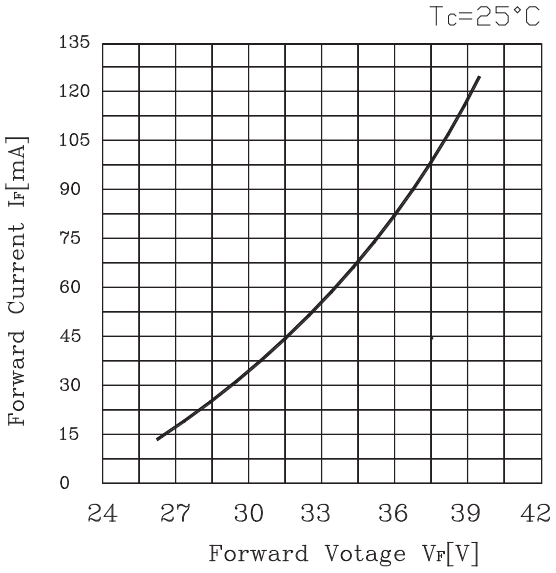
RoHS Compliant Lead Free

CHARACTERISITCS DIAGRAM (TYP.)

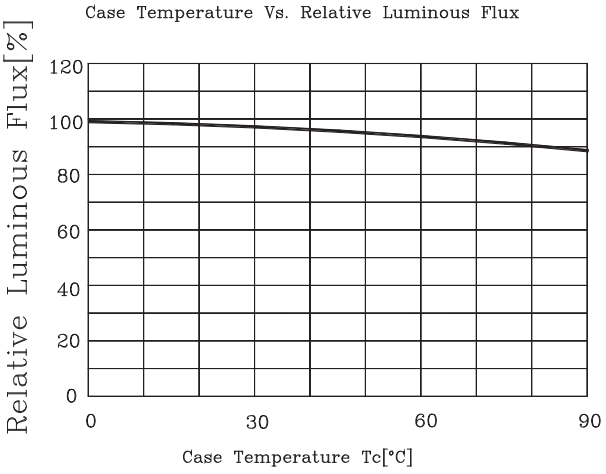
Forward Current Vs.Relative Luminous Flux



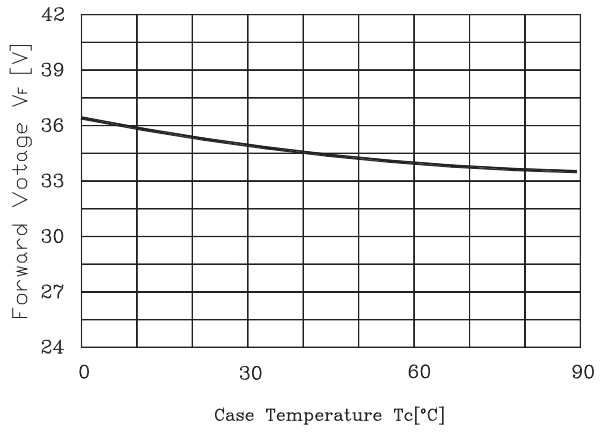
Forward Votage Vs. Forward Current



Case Temperature Vs. Relative Luminous Flux



Case Temperature Vs. Forward Votage



CHROMATICITY COORDINATES REGIONAL - 3000K

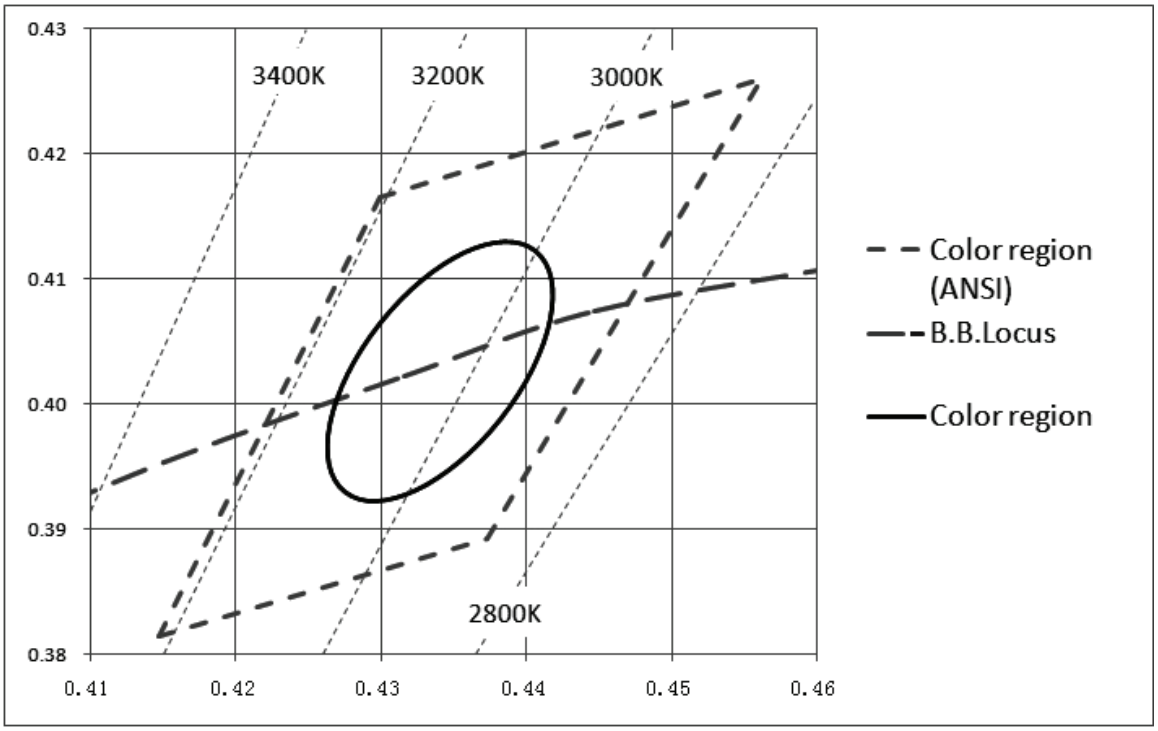
3000K CHROMATICITY COORDINATES

(Tolerance: x,y ± 0.005)

(I_F =80mA, T_c= 25℃)

Range		Chromaticity coordinates				
		NO.1	NO.2	NO.3	NO.4	CENTER
	x	0.4562	0.4299	0.4147	0.4373	0.4338
	y	0.4260	0.4165	0.3814	0.3893	0.4030

Chromaticity Diagram



Note: The tolerance of measurement at our tester is VF±3% , Dv±10% , Chromaticity(x,y)±0.005.

CHROMATICITY COORDINATES REGIONAL - 5000K

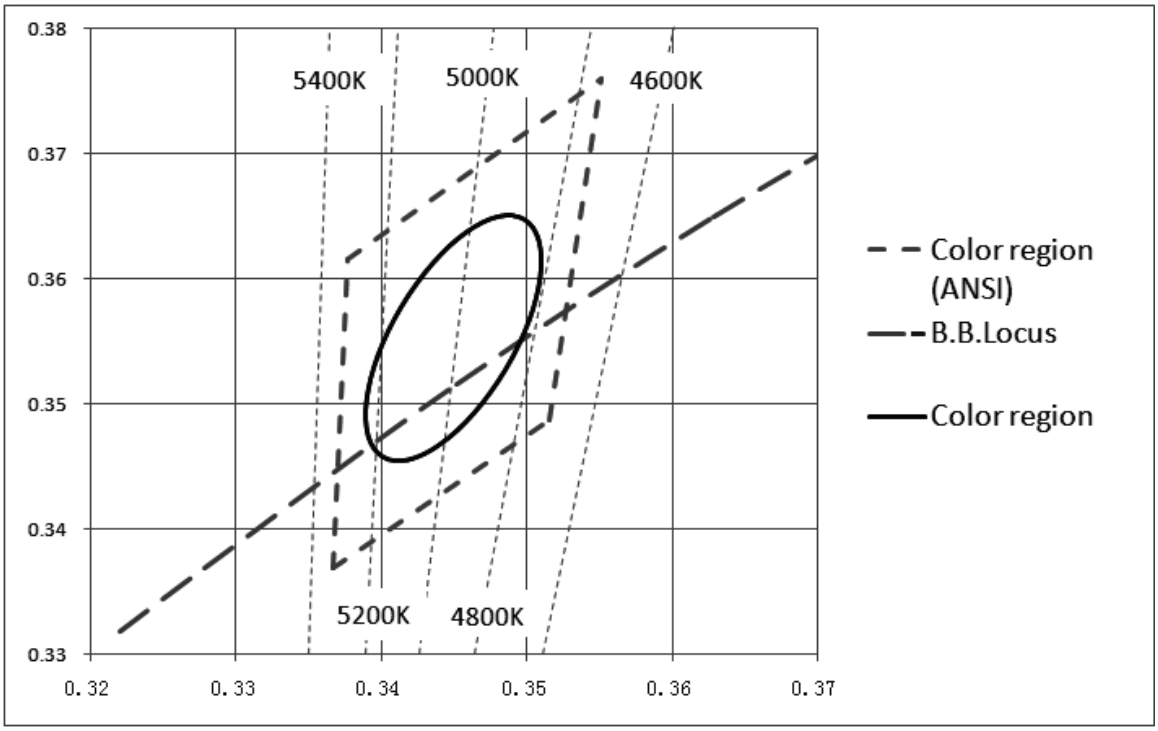
5000K CHROMATICITY COORDINATES

(Tolerance: x,y ± 0.005)

(I_F =80mA, T_c= 25℃)

Range		Chromaticity coordinates				
		NO.1	NO.2	NO.3	NO.4	CENTER
	x	0.3551	0.3376	0.3366	0.3515	0.3447
	y	0.3760	0.3616	0.3369	0.3487	0.3553

Chromaticity Diagram



Note: The tolerance of measurement at our tester is VF±3% , Dv±10% , Chromaticity(x,y)±0.005.

CHROMATICITY COORDINATES REGIONAL - 6500K

6500K CHROMATICITY COORDINATES

(Tolerance: x,y ± 0.005)

(I_F =80mA, T_c= 25℃)

Range		Chromaticity coordinates				
		NO.1	NO.2	NO.3	NO.4	CENTER
	x	0.3205	0.3028	0.3068	0.3221	0.3123
	y	0.3481	0.3304	0.3113	0.3261	0.3238

Chromaticity Diagram