



PARA LIGHT ELECTRONICS CO., LTD.

4F, No.1, Lane 93, Chien Yi Road, Chung Ho City, Taipei, Taiwan, R.O.C.

Tel: 886-2-2225-3733 Fax: 886-2-2225-4800

E-mail: para@para.com.tw <http://www.para.com.tw>

DATA SHEET

PART NO. : L-C195TBJRCT

REV : A / 0

CUSTOMER'S APPROVAL : _____ DCC : _____

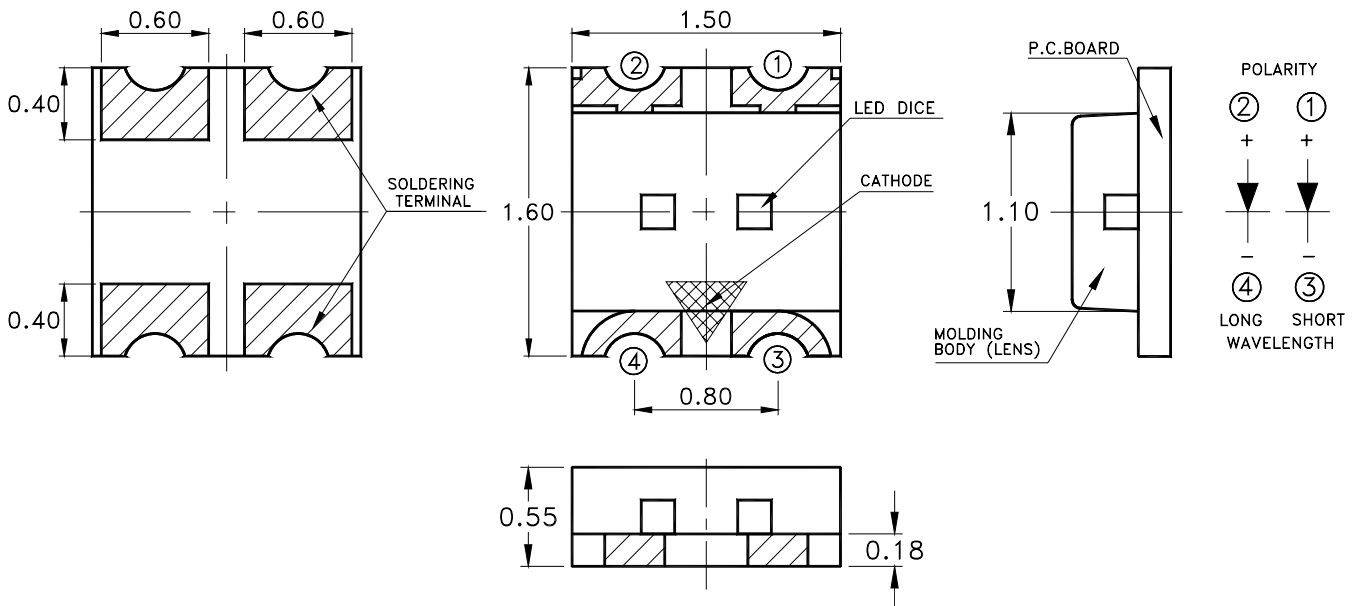


Dome Lens Chip LED

L-C195TBJRCT

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PACKAGE DIMENSIONS



Note:

1. All Dimensions are in millimeters (inches)
2. Tolerance is $\pm 0.10\text{mm}$ (0.004 ") Unless otherwise specified.



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FEATURES

- * LOW POWER CONSUMPTION
- * I.C. COMPATIBLE
- * LONGLIFE SOLID STATE RELIABILITY

CHIP MATERIALS

- * Dice Material : InGaN / AlInGaP
- * Light Color : BLUE & RED
- * Lens Color : WATER CLEAR

ABSOLUTE MAXIMUM RATING : (Ta = 25°C)

SYMBOL	PARAMETER	BLUE		UNIT
		B	R	
PD	Power Dissipation	76	75	mW
If	Forward Current	20	30	mA
Ifp	Peak pulsing current (1/10 duty cycle 0.1ms)	100	80	mA
VR	Reverse Voltage	5		V
Topr	Operating Temperature Range	-20 ~ + 80		
Tstg	Storage Temperature Range	-30 ~ + 100		

ELECTRO-OPTICAL CHARACTERISTICS : (Ta = 25°C)

SYMBOL	PARAMETER	TEST CONDITION	VALUE			UNIT
			MIN.	TYP.	MAX.	
VF	Forward Voltage	IF = 20mA	B	3.3	3.8	V
			R	2.0	2.4	
IR	Reverse Current	VR = 5V			10	μA
Δλ	Spectral Line Half-Width	IF = 20mA	B	25		nm
			R	15		
λp	Peak Emission Wavelength	IF = 20mA	B	468		nm
			R	639		
λD	Dominant Wavelength	IF = 20mA	B	470		nm
			R	631		
2θ1/2	Half Intensity Angle	IF = 20mA		130		deg
Iv	Luminous Intensity	IF = 20mA	B	18.0	45.0	mcd
			R	18.0	45.0	



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Typical Electro-Optical Characteristics Curves (25 Ambient Temperature Unless Otherwise Noted)

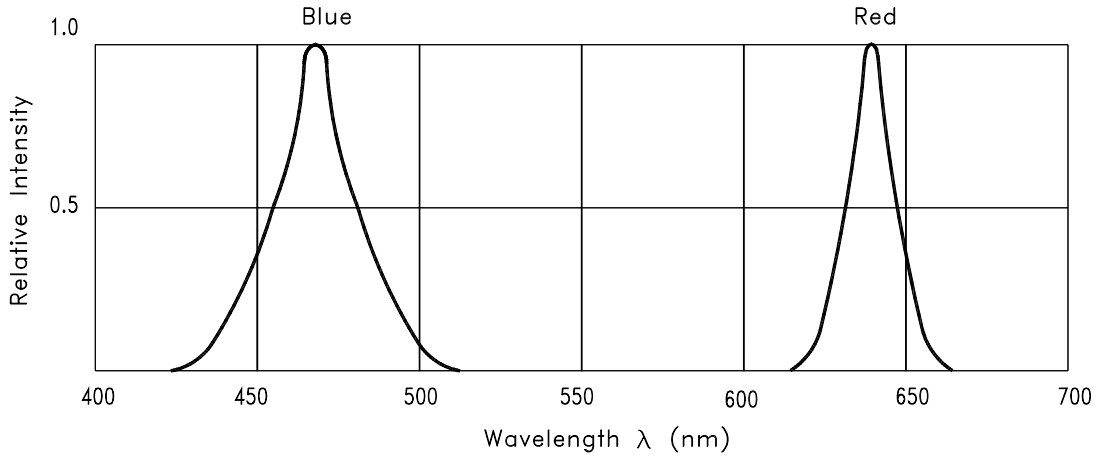


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

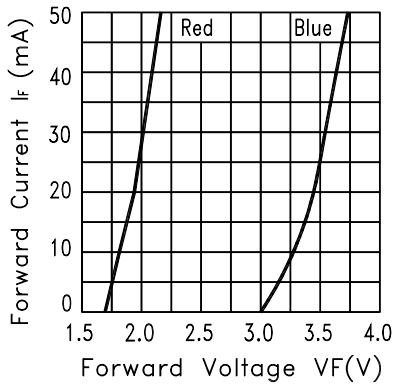


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

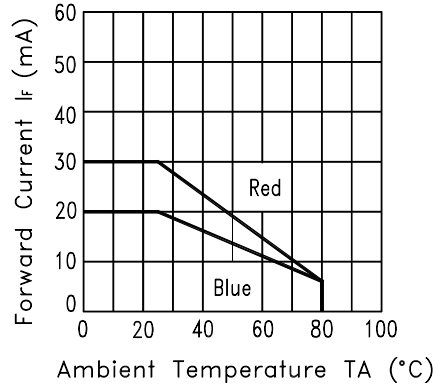


Fig.3 FORWARD CURRENT DERATING CURVE

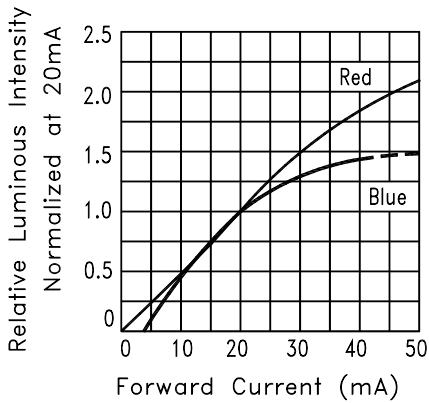


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

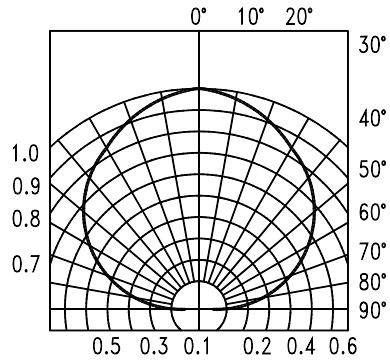


Fig.6 SPATIAL DISTRIBUTION



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Bin Code List

Luminous Intensity(IV), Unit:mcd@20mA		
Super Blue		
Bin Code	Min	Max
M	18.0	28.0
N	28.0	45.0
P	45.0	71.0
Q	71.0	112.0

Tolerance of each bin are $\pm 15\%$

Luminous Intensity(IV), Unit:mcd@20mA		
Super Red		
Bin Code	Min	Max
M	18.0	28.0
N	28.0	45.0
P	45.0	71.0
Q	71.0	112.0

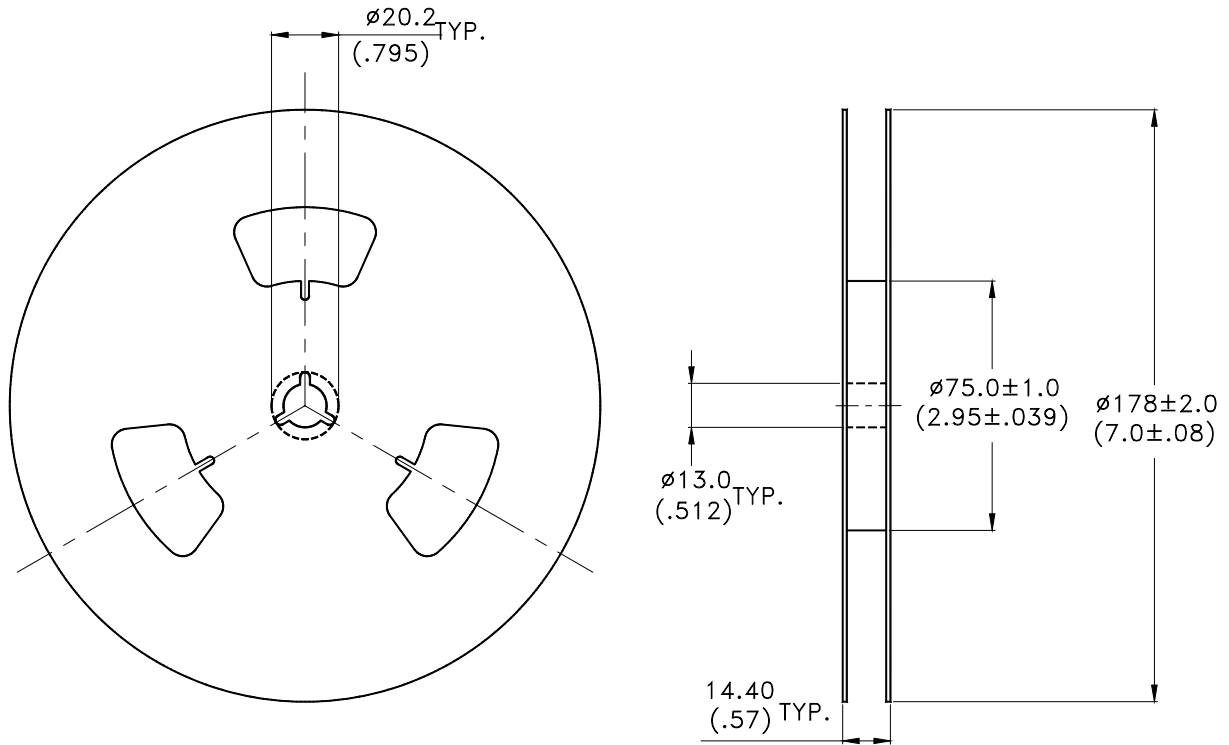
Tolerance of each bin are $\pm 15\%$



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Notes:

1. Empty component pockets sealed with top cover tape.
2. 7 inch reel-4000 pieces per reel.
3. The maximum number of consecutive missing lamps is two.
4. In accordance with ANSI/EIA 481-1-A-1994 specifications.



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Test items and results of reliability

Classification	Test Item	Test Condition	Reference Standard
Endurance Test	Operation Life	Ta= Under Room Temperature As Per Data Sheet Maximum Rating *Test Time= 1000HRS (-24HRS,+72HRS)*@20mA.	MIL-STD-750D:1026 (1995) MIL-STD-883D:1005 (1991) JIS C 7021:B-1 (1982)
	High Temperature High Humidity Storage	IR-Reflow In-Board, 2 Times Ta= 65±5°C, RH= 90~95% *Test Time= 240HRS±2HRS	MIL-STD-202F:103B(1980) JIS C 7021:B-11(1982)
	High Temperature Storage	Ta= 105±5°C *Test Time= 1000HRS (-24HRS,+72HRS)	MIL-STD-883D:1008 (1991) JIS C 7021:B-10 (1982)
	Low Temperature Storage	Ta= -55±5°C *Test Time=1000HRS (-24HRS,+72HRS)	JIS C 7021:B-12 (1982)
Environmental Test	Temperature Cycling	105°C ~ 25°C ~ -55°C ~ 25°C 30mins 5mins 30mins 5mins 10 Cycles	MIL-STD-202F:107D (1980) MIL-STD-750D:1051(1995) MIL-STD-883D:1010 (1991) JIS C 7021:A-4(1982)
	Thermal Shock	IR-Reflow In-Board, 2 Times 85 ± 5°C ~ -40°C ± 5°C 10mins 10mins 10 Cycles	MIL-STD-202F:107D(1980) MIL-STD-750D:1051(1995) MIL-STD-883D:1011 (1991)
	Solder Resistance	T.sol= 260 ± 5°C Dwell Time= 10 ± 1secs	MIL-STD-202F:210A(1980) MIL-STD-750D:2031(1995) JIS C 7021:A-1(1982)
	IR-Reflow	Ramp-up rate(183°C to Peak) +3°C/ second max Temp. maintain at 125(±25)°C 120 seconds max Temp. maintain above 183°C 60-150 seconds Peak temperature range 235°C+5/-0°C Time within 5°C of actual Peak Temperature (tp) 10-30 seconds Ramp-down rate +6°C/second max	MIL-STD-750D:2031.2(1995) J-STD-020(1999)
	Solderability	T.sol= 235 ± 5°C Immersion time 2±0.5 sec Immersion rate 25±2.5 mm/sec Coverage ≥95% of the dipped surface	MIL-STD-202F:208D(1980) MIL-STD-750D:2026(1995) MIL-STD-883D:2003(1991) IEC 68 Part 2-20 JIS C 7021:A-2(1982)