

Lamp Type LED - 5mm Oval

Synonymous with function and performance, the 5mm Oval LED has superior performance in outdoor applications due to its well-defined radiation pattern and wide viewing angle. These lamps are made with an advanced optical grade epoxy, offering superior high temperature and high moisture resistance performance in outdoor signal and sign applications

Features:

- > High brightness white lamp.
- > 100° x 40° viewing angle.
- > Superior resistance to moisture.
- > Suitable for TTW soldering.

Applications:

- > Full color signs
- > Outdoor displays/signs



Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 20mA IV (mcd)		
			Min.	Typ.	Max.
L6W-NA400-X2Z1-1	White	100/40	2240.00	3550.00	5600.00

NOTE

- Luminous intensity is measured with an accuracy of ± 15%.
- Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.

Electrical Characteristics at Tj=25°C

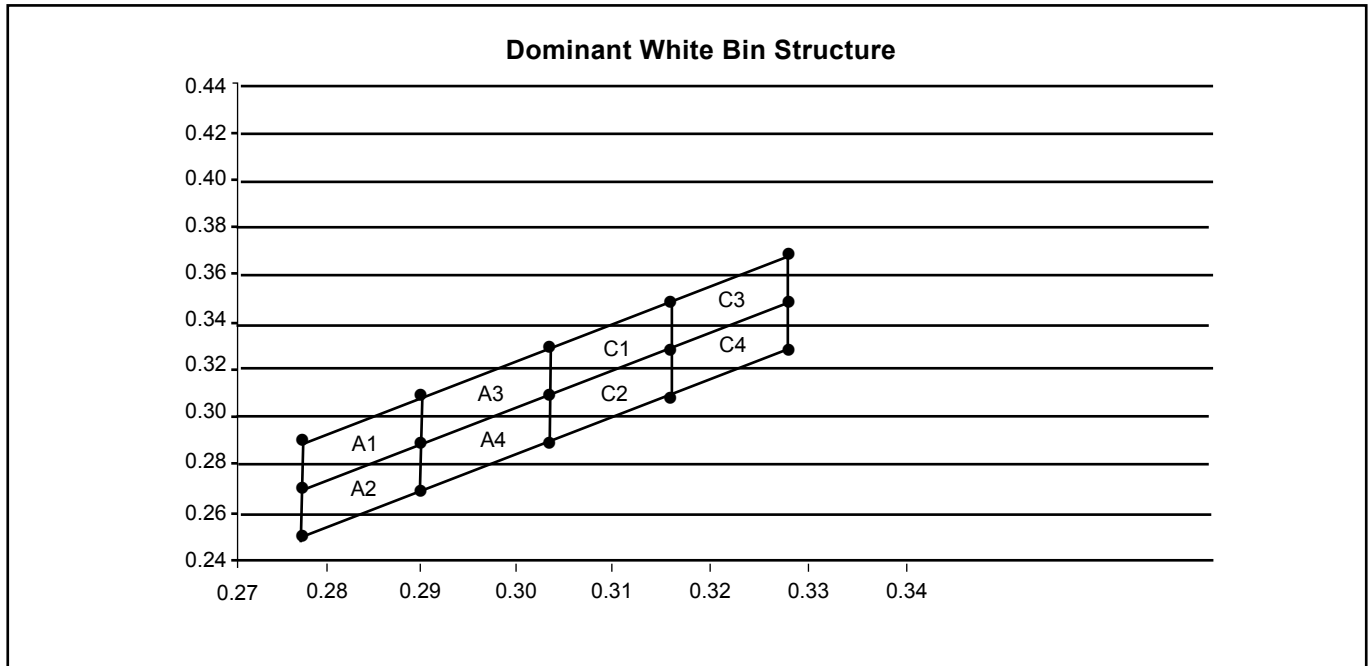
Part Number	Vf @ If = 20mA			Vr @ Ir = 10uA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
L6W-NA4xx	2.8	3.2	3.8	5

Forward voltages are measure using a current pulse of 1 ms and with an accuracy of ± 0.1V.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	25	mA
Peak pulse current; (tp ≤ 100µs, Duty cycle = 0.10)	100	mA
Reverse voltage ; Ir (max) = 10µA.	5	V
ESD threshold (HBM)	2000	V
LED junction temperature	120	°C
Operating temperature	-40 ... +95	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	95	mW

White Color Grouping

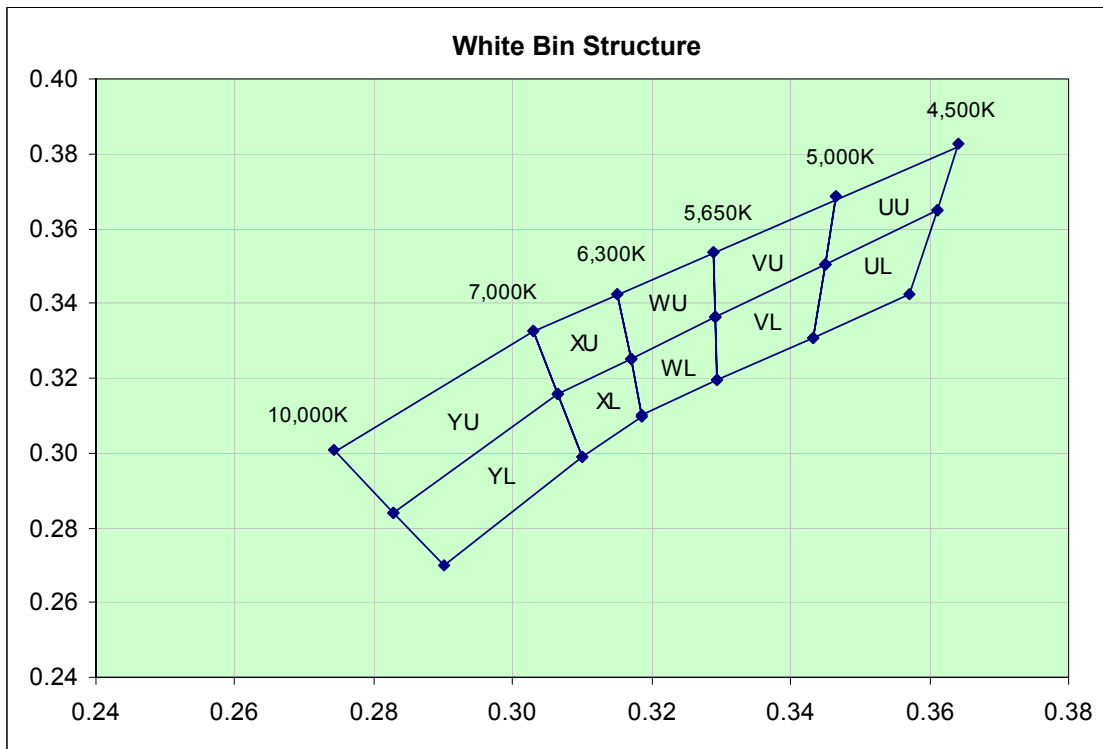


Chromaticity coordinate groups are measured with an accuracy of ± 0.01 .

Bin		Cx	Cy	Cx	Cy
A1	Cx	0.2775	0.2732	0.2900	0.2900
	Cy	0.2775	0.2557	0.2900	0.2939
A2	Cx	0.2900	0.2939	0.3025	0.2900
	Cy	0.2900	0.2764	0.3025	0.3114
A3	Cx	0.3025	0.3146	0.3025	0.2900
	Cy	0.3025	0.2971	0.3025	0.3321
A4	Cx	0.3150	0.3354	0.3150	0.3114
	Cy	0.3150	0.2971	0.3150	0.3146
C1	Cx	0.3150	0.3179	0.3150	0.2900
	Cy	0.3150	0.3179	0.3150	0.2939
C2	Cx	0.3275	0.3561	0.3275	0.3025
	Cy	0.3275	0.3561	0.3275	0.3025
C3	Cx	0.3275	0.3736	0.3275	0.3150
	Cy	0.3275	0.3561	0.3275	0.3150
C4	Cx	0.3386	0.3354	0.3386	0.3150
	Cy	0.3386	0.3179	0.3386	0.3150

InGaN wavelength is very sensitive to drive current. Operating at lower current is not recommended and may yield unpredictable performance. Current pulsing should be used for dimming purposes.

White Color Grouping



Chromaticity coordinate groups are measured with an accuracy of ± 0.01 .

Bin		1	2	3	4
YU	Cx	0.274	0.283	0.307	0.303
	Cy	0.301	0.284	0.316	0.333
YL	Cx	0.283	0.290	0.310	0.307
	Cy	0.284	0.270	0.299	0.316
XU	Cx	0.303	0.307	0.317	0.315
	Cy	0.333	0.316	0.325	0.343
XL	Cx	0.307	0.310	0.319	0.317
	Cy	0.316	0.299	0.310	0.325
WU	Cx	0.315	0.317	0.329	0.329
	Cy	0.343	0.325	0.336	0.354
WL	Cx	0.317	0.319	0.329	0.329
	Cy	0.325	0.310	0.319	0.336
VU	Cx	0.329	0.329	0.345	0.347
	Cy	0.354	0.336	0.350	0.368
VL	Cx	0.329	0.329	0.343	0.345
	Cy	0.336	0.319	0.331	0.350
UU	Cx	0.347	0.345	0.361	0.364
	Cy	0.368	0.350	0.365	0.383
UL	Cx	0.345	0.343	0.357	0.361
	Cy	0.350	0.331	0.343	0.365

Dominant color coordinate is measured with an accuracy of ± 0.01 .

Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity @ IV (mcd)
X2	2240.0...2850.0
Y1	2850.0...3550.0
Y2	3550.0...4500.0
Z1	4500.0...5600.0

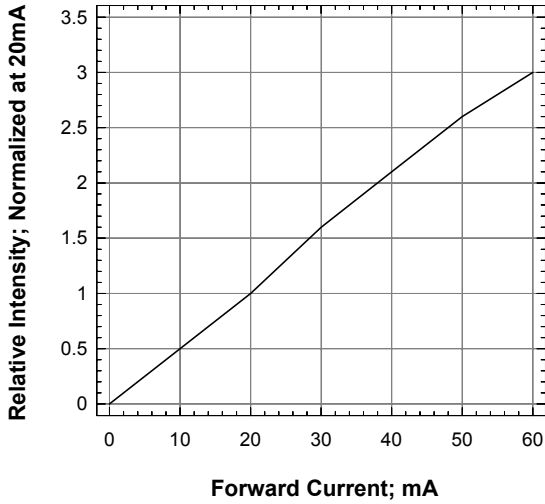
Luminous intensity is measured with an accuracy of ± 15%.

Vf Binning (Optional)

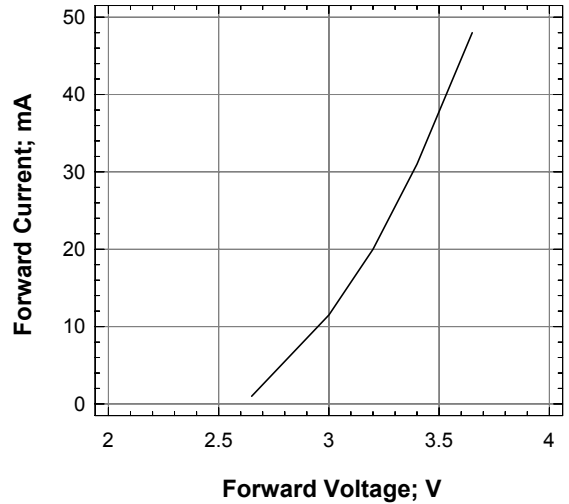
Vf Bin @ 20mA	Forward Voltage (V)
V7	2.80 ... 3.00
V8	3.00 ... 3.20
V9	3.20 ... 3.40
V10	3.40 ... 3.60
V11	3.60 ... 3.80

Forward voltage, Vf is measured with an accuracy of ± 0.1 V. Parts with the Vf binning option will be defined as L6W-Nxxxx-xxxx-x-Vx. Please consult sales and marketing for special part number to incorporate Vf binning.

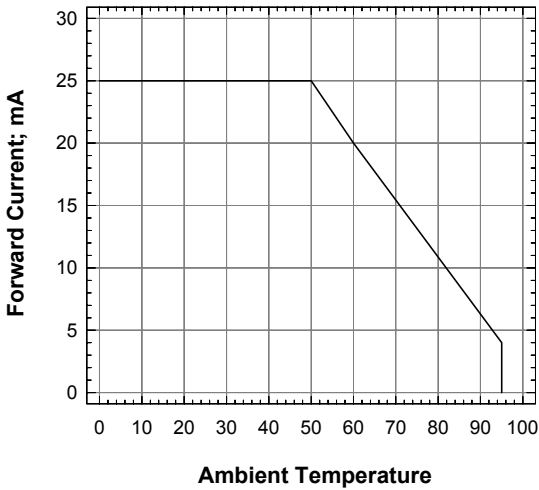
Relative Intensity Vs Forward Current



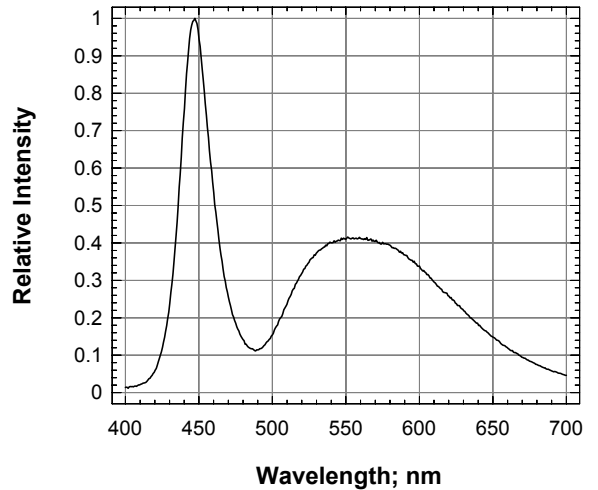
Forward Current Vs Forward Voltage



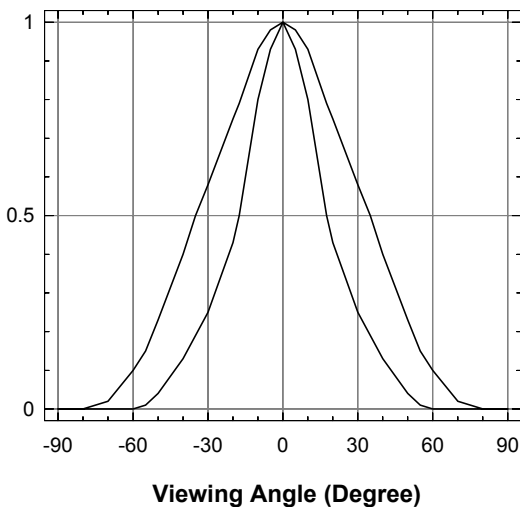
Forward Current Vs Ambient Temperature



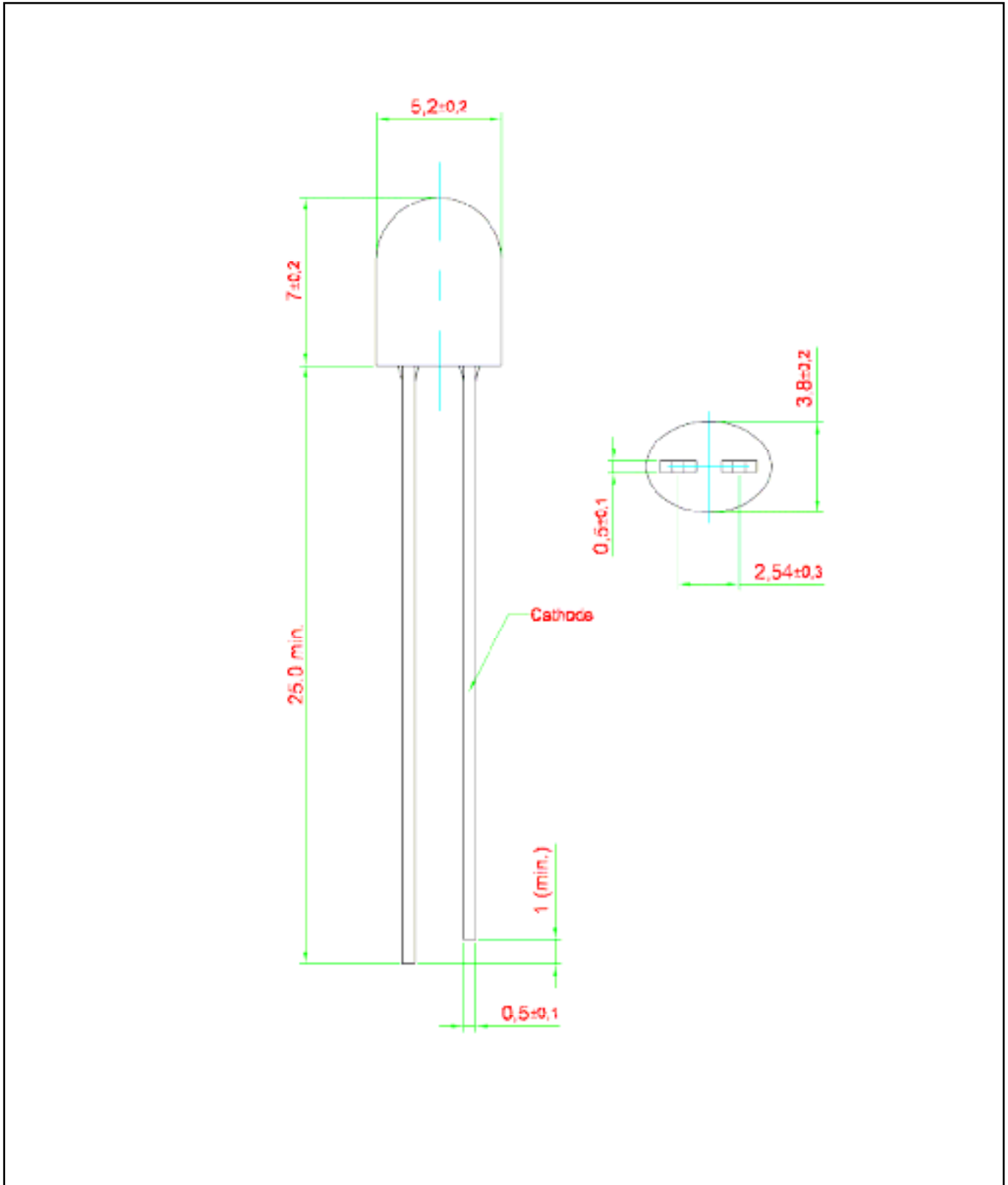
Relative Intensity Vs Wavelength



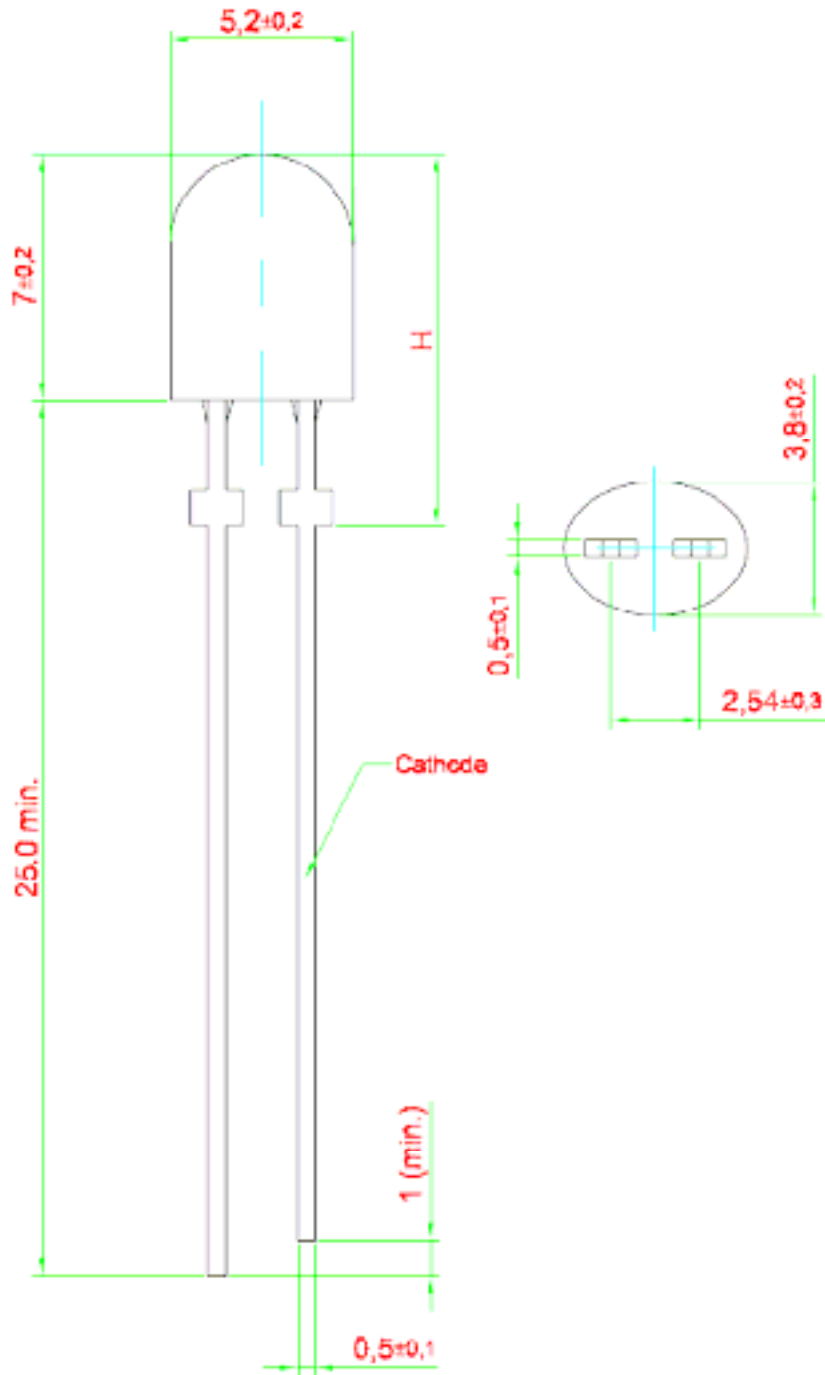
Radiation Pattern



5mm Oval Lamp • InGaN White: High Brightness Package Outlines



5mm Oval Lamp • InGaN White: High Brightness Package Outlines

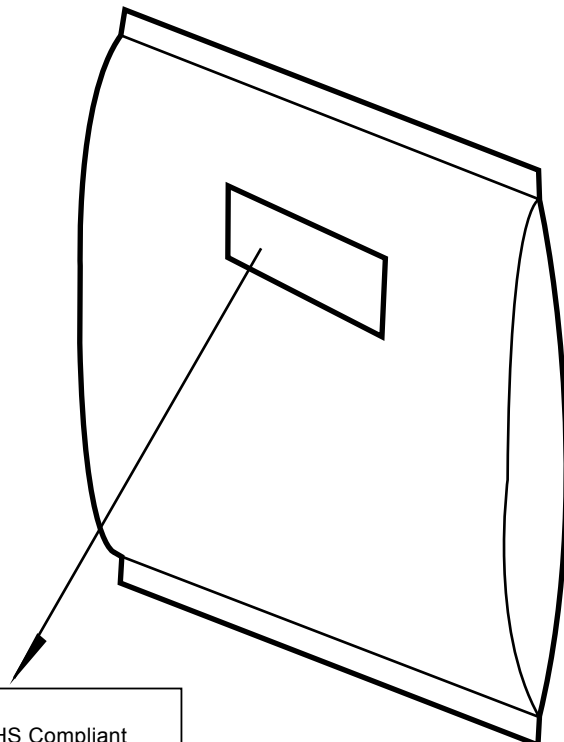


Parts with the stand-off option will be defined as L6W-NxxxS-xxxx-1
Option with stand-off - H = 10.8mm ± 0.5mm




Packaging Specification

1. Loose pack of 500pcs/pack: Lxx-xxxxx-xxxx-x-x-0

	Average 1pc 5mm Lamp	1 completed pack (500pcs)
Weight (gram)	0.29	150 ± 10

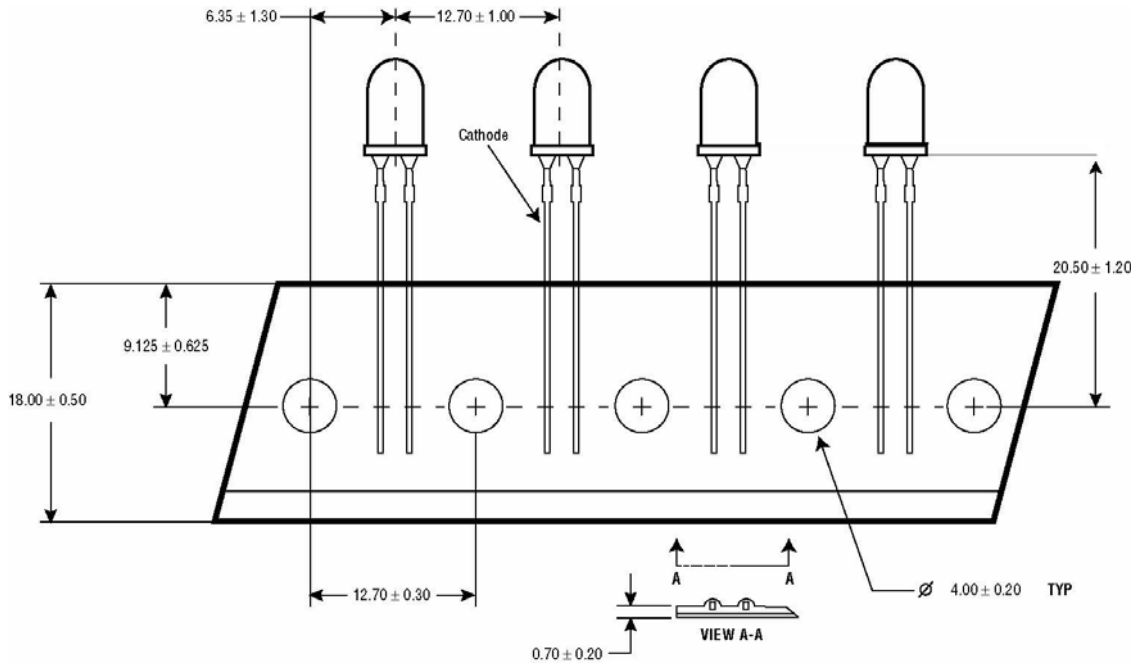


Barcode label

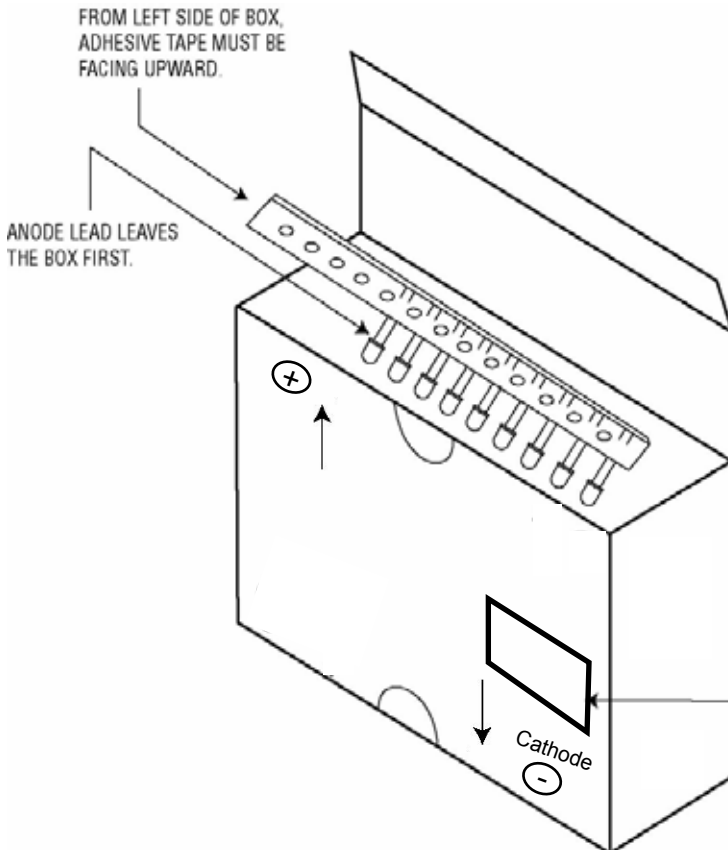
DOMINANT Semiconductors		ROHS Compliant
LOT NO : lotno		
		
PART NO : partno		PB Free
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		
		

Packaging Specification

2. Ammopack: Lxx-xxxxx-xxxx-x-x-A



Average 1pc 5mm Lamp (g)	Box Dimensions (mm)	Empty Box Weight (kg)	Quantity / Box (pcs)	1 Completed Box With Units (kg)
0.29	335 x 235 x 48	0.14	2,000	0.95 ± 10



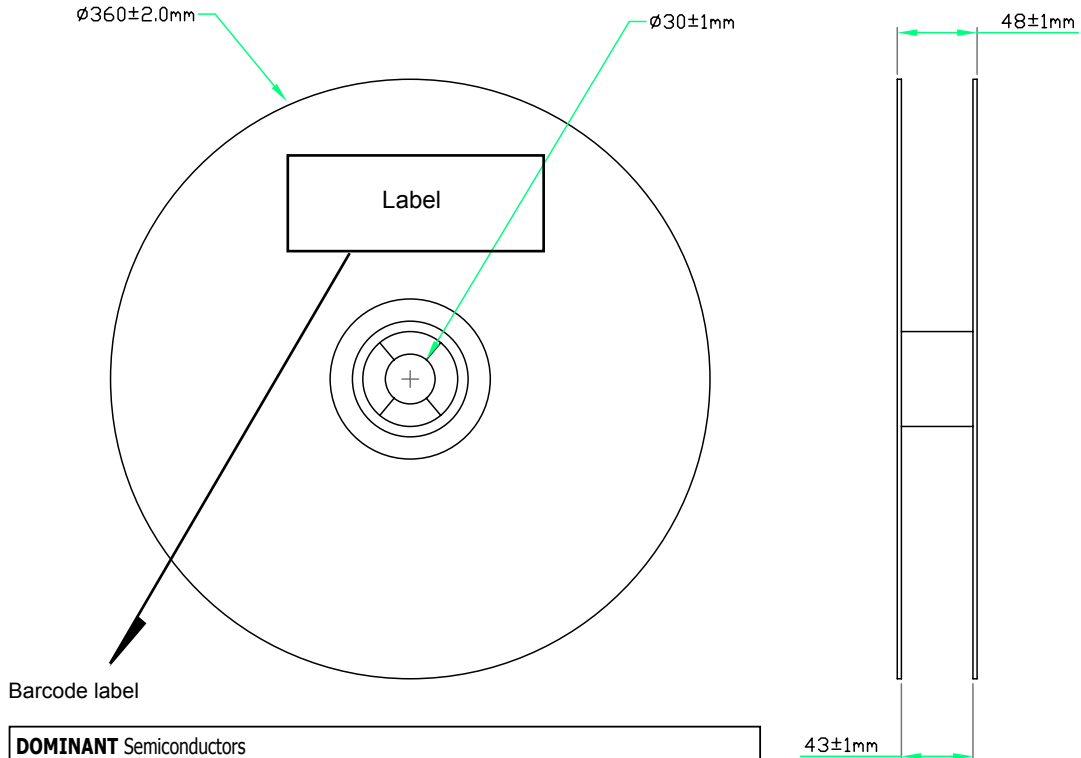
Barcode label

DOMINANT Semiconductors	ROHS Compliant
LOT NO : lotno	
PART NO : partno	PB Free
QTY : product quantity per reel S/N : serial no D/C: date code	
GROUP : group	

LABEL ON THIS SIDE OF BOX

Packaging Specification

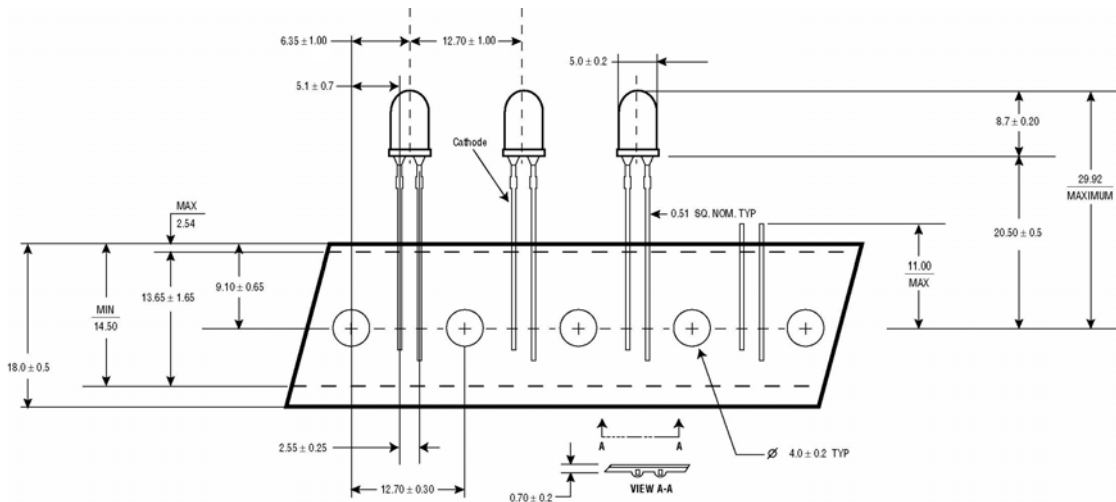
3. Reel: Lxx-xxxxx-xxxx-x-x-T



Barcode label

DOMINANT Semiconductors		ROHS Compliant
LOT NO : lotno		
PART NO : partno		PB Free
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		

Average 1pc 5mm Lamp (g)	Empty Reel Weight (kg)	Quantity / Reel (pcs)	1 Completed Reel (kg)
0.29	0.39	1,300	0.95 ± 10



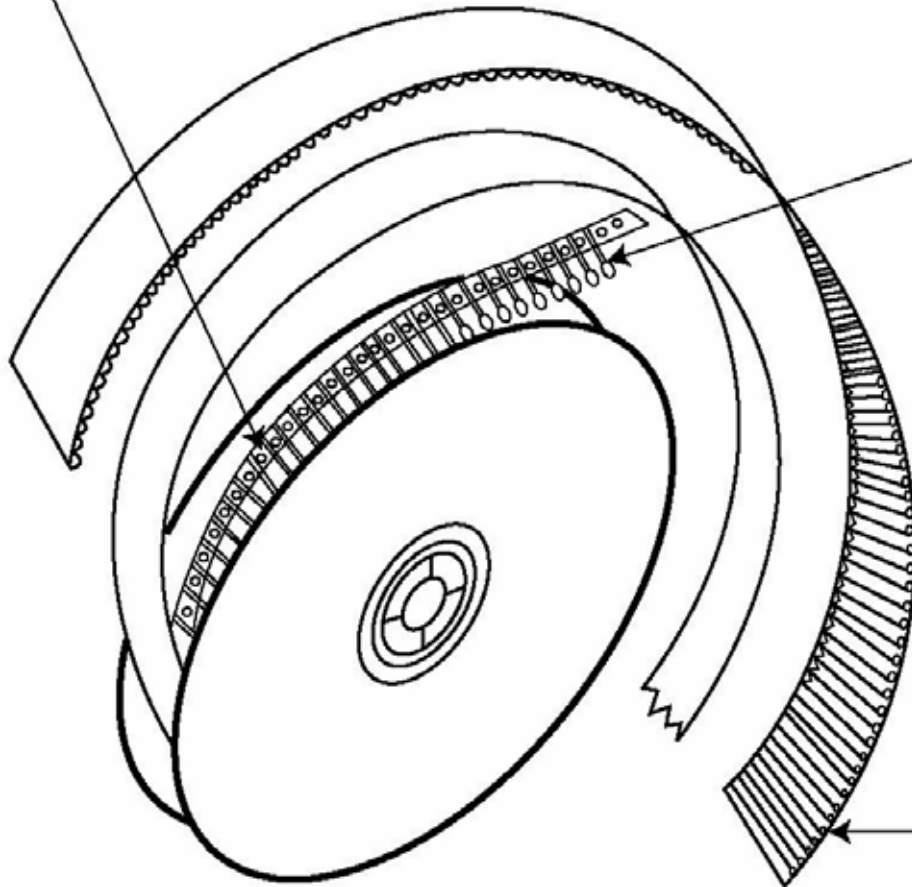
Packaging Specification

Adhesive Tape Must
Be Facing Towards
The Outside Of The Reel

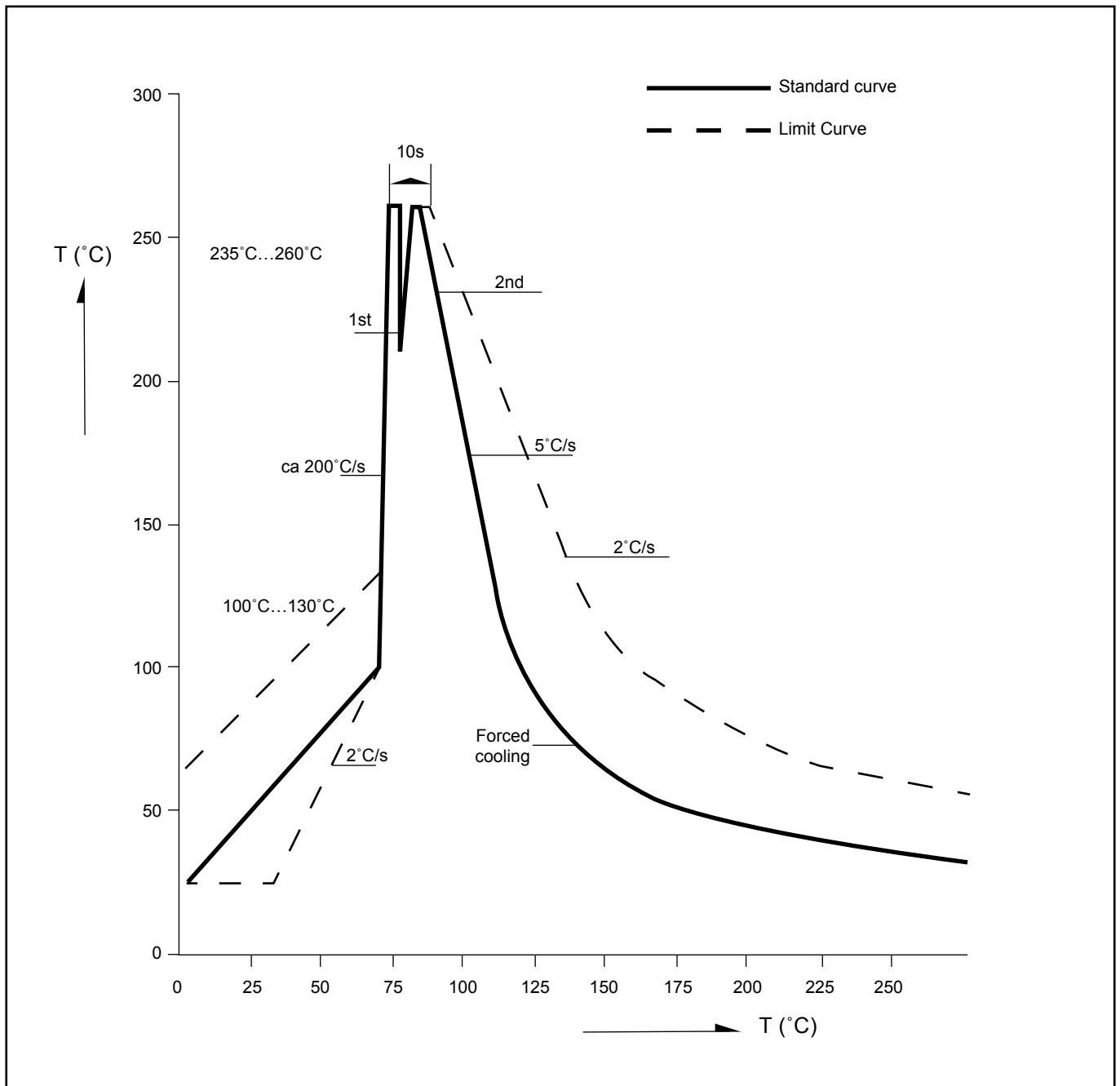
Reeling Orientation
Clockwise

Anode Lead
Leaves The
Reel First

Protective
Cardboard



Recommended TTW Soldering Profile (acc. to CECC 00802)



Revision History

Page	Subjects	Date of Modification
-	Initial Release	16 Jun 2009

NOTE

All the information contained in this document is considered to be reliable at the time of publishing. However, DOMINANT Semiconductors does not assume any liability arising out of the application or use of any product described herein.

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About Us

DOMINANT Semiconductors is a dynamic Malaysian Corporation that is among the world's leading SMT LED Manufacturers. An excellence – driven organization, it offers a comprehensive product range for diverse industries and applications. Featuring an internationally certified quality assurance acclaim, DOMINANT's extra bright LEDs are perfectly suited for various lighting applications in the automotive, consumer and communications as well as industrial sectors. With extensive industry experience and relentless pursuit of innovation, DOMINANT's state-of-art manufacturing, research and testing capabilities have become a trusted and reliable brand across the globe. More information about DOMINANT Semiconductors can be found on the Internet at <http://www.dominant-semi.com>.

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