



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

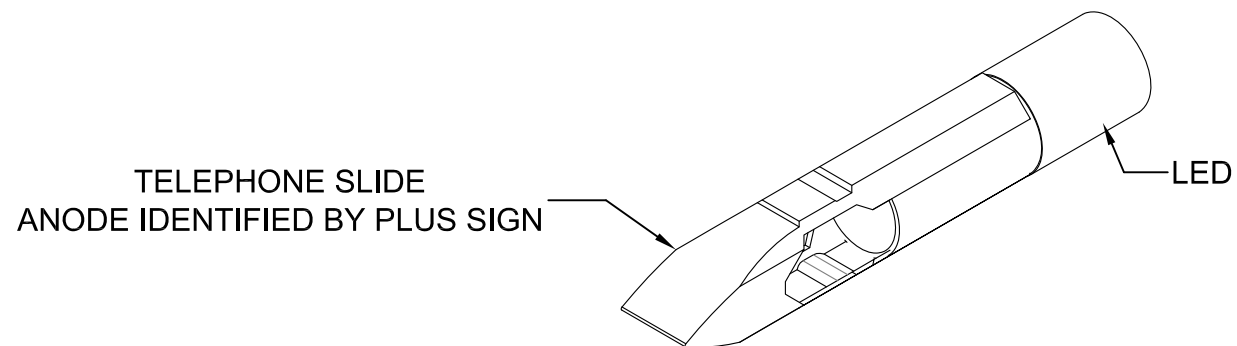
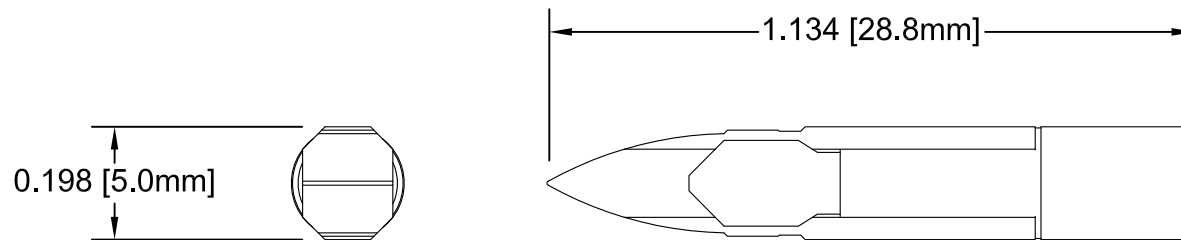
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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



REV.	DESCRIPTION	DATE	APPROVED
A	Engineering Release	10/21/13	G. W.



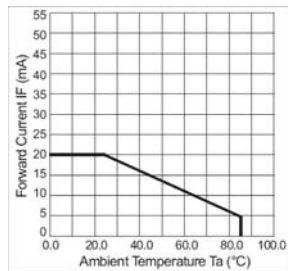
NOTES:
 1. DIRECT REPLACEMENT FOR Ts5.5 (T5.5 TELEPHONE SLIDE) BASED LAMPS

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED)		BIVAR [®] 4 THOMAS, IRVINE, CA. 92618
<u>DECIMALS</u>	<u>ANGULAR</u>	
.X ± .1	X° ± 1°	TITLE: 209 SERIES INCANDESCENT REPLACEMENT LED PART NO: LFR-209X-XXX REVISION: A
.XX ± .02		
.XXX ± .010		
DESIGNED: Alex Wright	DATE: 10/21/13	CAGE CODE : 32559 SHEET # 1 OF 2 <small>CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING.</small>
CHECKED: Minh Doan	DATE: 10/21/13	

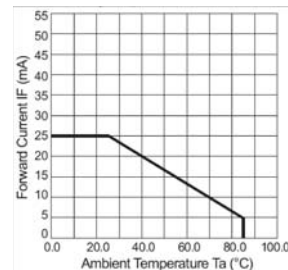
REV.	DESCRIPTION	DATE	APPROVED
	SEE SHEET #1		

DERATING CURVES

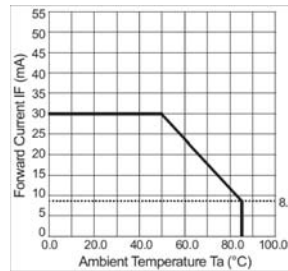
Derating Graph 1



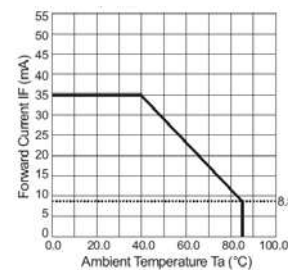
Derating Graph 2



Derating Graph 3



Derating Graph 4



Bivar Part Number	Wave Length λ_p (nm)	Emitted Color	Lens Appearance	Operating Voltage	Electro-Optical Data		Viewing Angle	De-rating Graphs
				Vf (Vdc)	Current DC (mA)	Iv (mcd)		
				TYP	TYP	TYP		
LFR-209R12V	630	RED	CLEAR	12	20	600	120	1
LFR-209R28V	630	RED	CLEAR	28	20	600	120	1
LFR-209Y12V	585	YELLOW	CLEAR	12	20	600	120	1
LFR-209Y28V	585	YELLOW	CLEAR	28	20	600	120	1
LFR-209G12V	515	GREEN	CLEAR	12	20	800	120	2
LFR-209G24V	515	GREEN	CLEAR	24	20	800	120	2
LFR-209G28V	515	GREEN	CLEAR	28	20	800	120	2
LFR-209B12V	465	BLUE	CLEAR	12	20	230	120	4
LFR-209B28V	465	BLUE	CLEAR	28	20	230	120	4
Bivar Part Number	Chromaticity Coordinates	Emitted Color	Lens Appearance	Operating Voltage	Electro-Optical Data		Viewing Angle	De-rating Graphs
				Vf (Vdc)	Current DC (mA)	Iv (mcd)		
				TYP	TYP	TYP		
LFR-209WW12V	X=0.4255~0.4680 Y=0.4000~0.4385	WARM WHITE	CLEAR	12	20	850	120	3
LFR-209WW28V	X=0.4255~0.4680 Y=0.4000~0.4385	WARM WHITE	CLEAR	28	20	850	120	3
LFR-209CW12V	X=0.31 Y=0.32	COOL WHITE	CLEAR	12	20	1100	120	3
LFR-209CW28V	X=0.31 Y=0.32	COOL WHITE	CLEAR	28	20	1100	120	3

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

MAXIMUM POWER DISSIPATION _____ 500 mW
 OPERATING TEMPERATURE RANGE _____ -40°C ~ 85°C
 STORAGE TEMPERATURE _____ -40°C ~ 100°C

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED)		BIVAR [®] 4 THOMAS, IRVINE, CA. 92618 TEL: (949) 951-8808 FAX: (949) 951-3974
DECIMALS	ANGULAR	
DESIGNED: Alex Wright	DATE: 10/21/13	TITLE: 209 SERIES INCANDESCENT REPLACEMENT LED
CHECKED: Minh Doan	DATE: 10/21/13	PART NO: LFR-209X-XXX
		REVISION: A
		CAGE CODE : 32559 SHEET # 2 OF 2
CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING.		