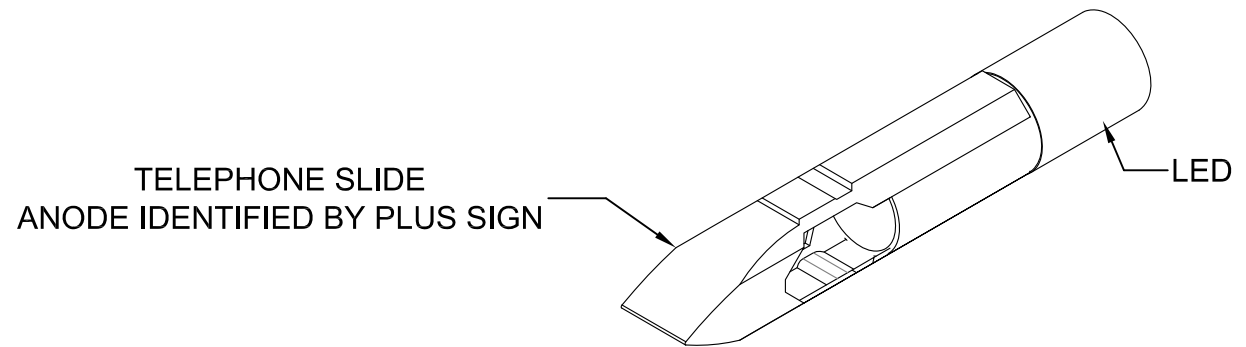
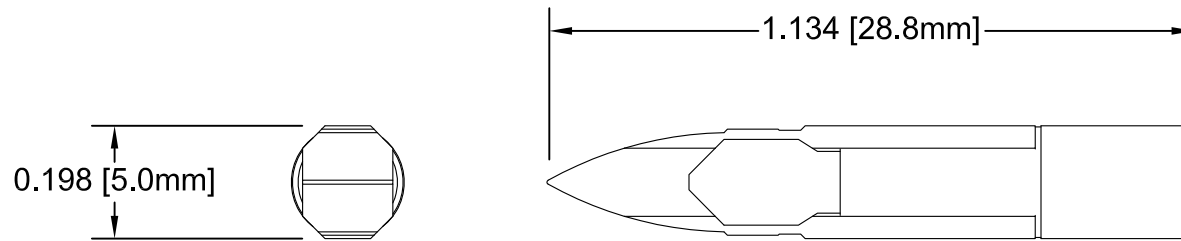


REV.	DESCRIPTION	DATE	APPROVED
A	Engineering Release	10/21/13	G. W.



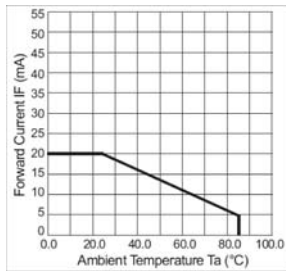
NOTES:
 1. DIRECT REPLACEMENT FOR Ts5.5 (T5.5 TELEPHONE SLIDE) BASED LAMPS

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	

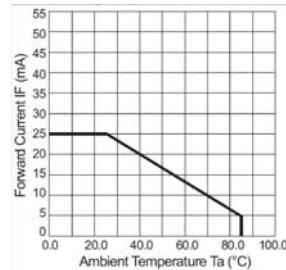
REV.	DESCRIPTION	DATE	APPROVED
	SEE SHEET #1		

DERATING CURVES

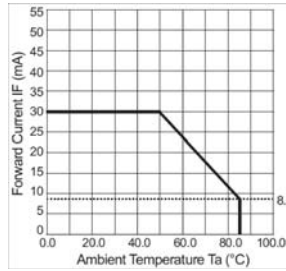
Derating Graph 1



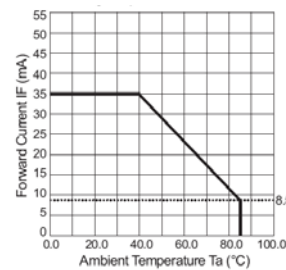
Derating Graph 2



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)		 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.			