Preliminary Product Datasheet

AUTOML-C0W1

High Brightness Multi-Channel Headlight LED

Introduction

AUTOML is a linear packaged LED component tailored to, but not limited to automotive headlight lighting. This high brightness product has a seamless, uniform light pattern and is designed with exceptional thermal stability to accommodate the stringent quality requirements of the automotive industry.

Features & Applications

- High lumen maintenance at high temperature
- Optimized lumen density
- Lambertian radiation pattern
- Large thermal pad with electrical isolated
- Individual LED control
- Applications: Exterior automotive head lighting and floodlighting

Table of Contents

RoHS Compliant

Characteristics

Absolute Maximum Ratings (Tc = 25°C)

Parameter	Rating
	AUTOML-C0W1
DC Forward Current per chip	1000 mA
LED Junction Temperature	150°C
LED Operating Temperature	-40°C ~ 125°C
Storage Temperature	-40°C ~ 125°C
Preconditioning	Acc. to JEDEC Level 1

Note: 1. DC forward current was defined by all LED in series connection.

Luminous Flux and Forward Voltage (Tc = 25°C)

Part number	Color	Performance at Test Current per chip (1000mA)				
		Group	Luminous Flux (lm)		VF (V)	
			Min	Max	Min	Max
AUTOML-C0W1 (2 Chip)	Cool White	CEC	480	520	6	8
		CED	520	560	6	8
		CEE	560	600	6	8
		CFA	600	650	6	8
AUTOML-C0W1 (3 Chip)	Cool White	CFD	750	800	9	12
		CFE	800	850	9	12
		CGA	850	900	9	12
		CGB	950	1000	9	12
AUTOML-C0W1 (4 Chip)	Cool White	CGE	1050	1100	12	16
		CGF	1100	1150	12	16
		CGG	1150	1200	12	16
		CHA	1200	1300	12	16
AUTOML-C0W1 (5 Chip)	Cool White	NHA	1200	1300	15	20
		NHB	1300	1400	15	20
		NHC	1400	1500	15	20
		NHD	1500	1600	15	20

AUTOML-C0W1 (6 Chip)	Cool White	NHD	1500	1600	18	24
		NHE	1600	1700	18	24
		NHF	1700	1800	18	24
		NHG	1800	1900	18	24
AUTOML-C0W1 (7 Chip)v	Cool White	NHG	1800	1900	21	28
		NHH	1900	2000	21	28
		NHI	2000	2100	21	28
		NHJ	2100	2200	21	28
AUTOML-C0W1 (8 Chip)	Cool White	NHJ	2100	2200	24	32
		NHK	2200	2300	24	32
		NHL	2300	2400	24	32
		NHM	2400	2500	24	32

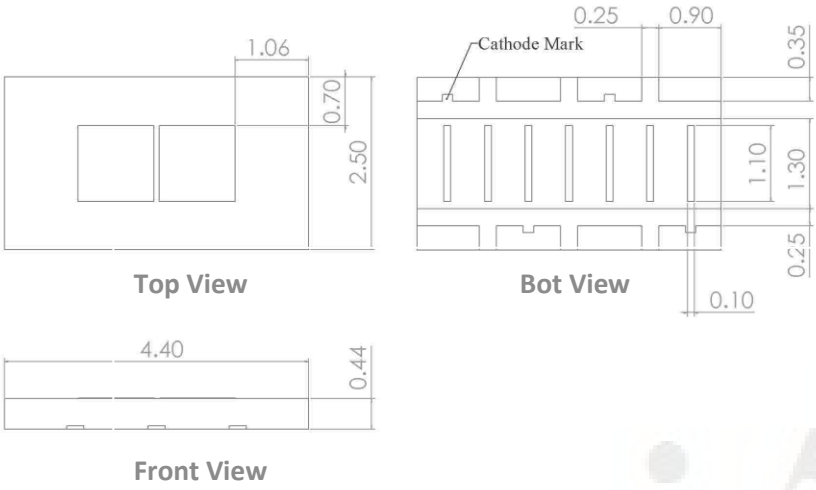
Note: 1. Luminous Flux is measured with an accuracy of ±10%

2. The forward voltage is measured with an accuracy of ±0.2V

3. Tested with all LED in series

Mechanical Dimensions

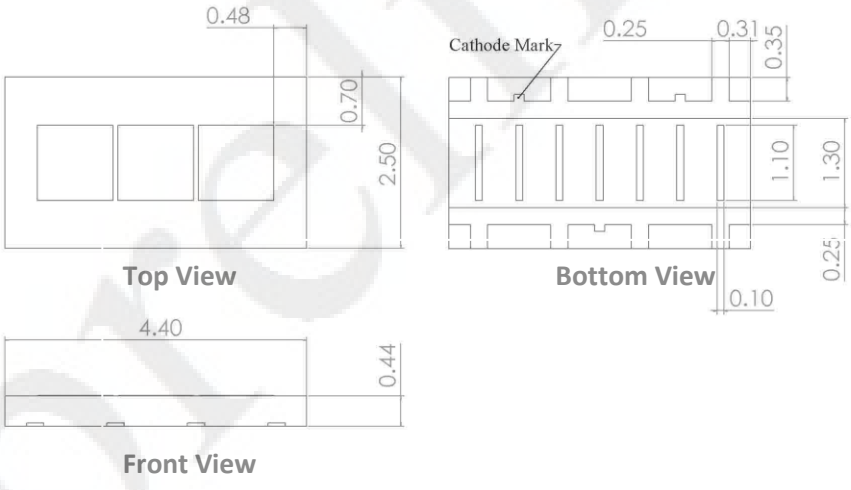
AUTOML-C0W1 (2 chips)



Notes :

1. Drawing is not to scale
2. All dimensions are in millimeter
3. Dimensions are ±0.13mm unless otherwise indicated

AUTOML-C0W1 (3 chips)



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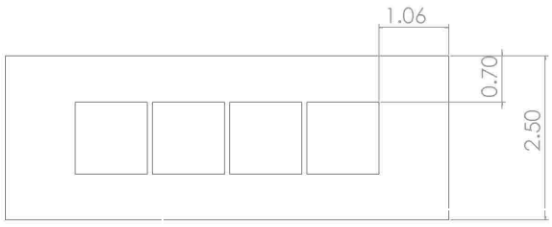
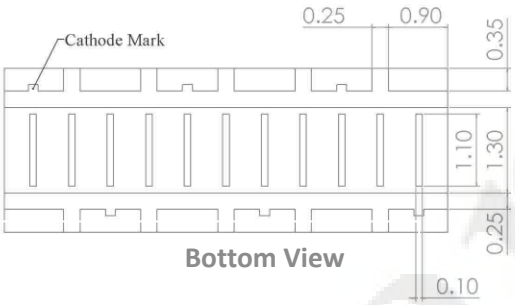
AUTOML-C0W1 (4 chips)



Top View



Bottom View

Front View

Notes :

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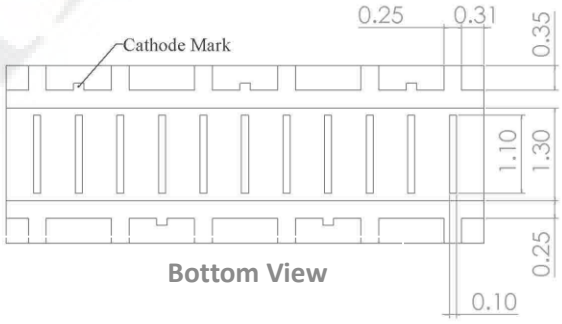
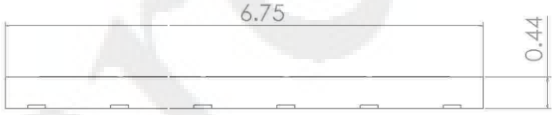
AUTOML-C0W1 (5 chips)

Top View



Bottom View



Front View

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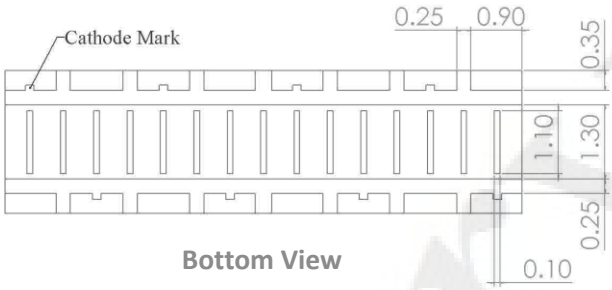
AUTOML-C0W1 (6 chips

Top View



Bottom View

Front View

Notes :

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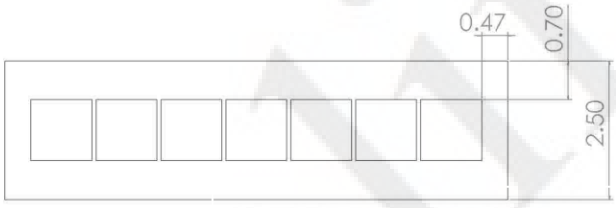
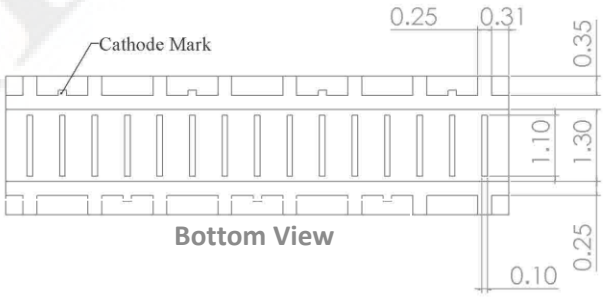
AUTOML-C0W1 (7 chips)



Top View



Bottom View

Front View

Notes :

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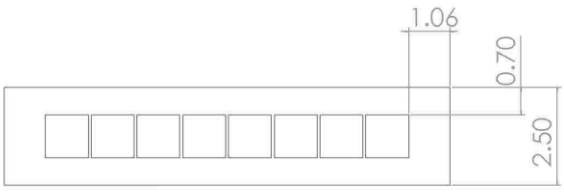
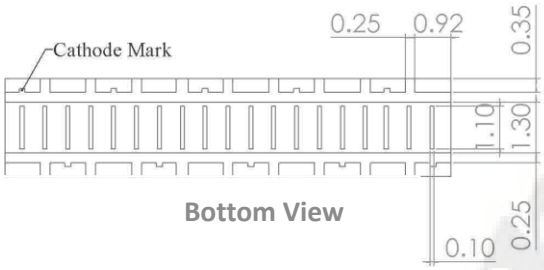
AUTOML-C0W1 (8 chips)



Top View



Bottom View

Front View

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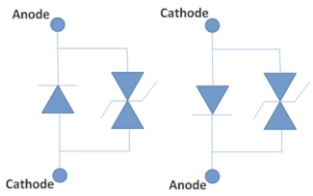
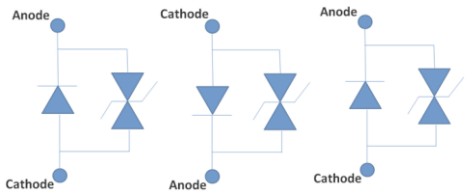
Electrical Circuit

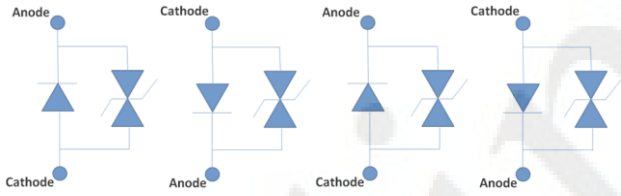
AUTOML-C0W1 (2 chips)



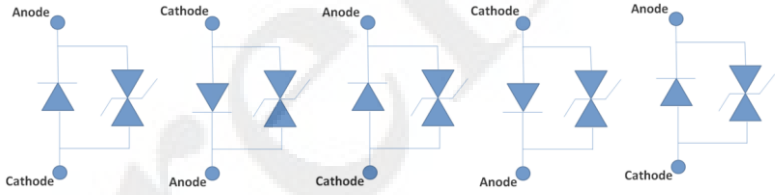
AUTOML-C0W1 (3 chips)



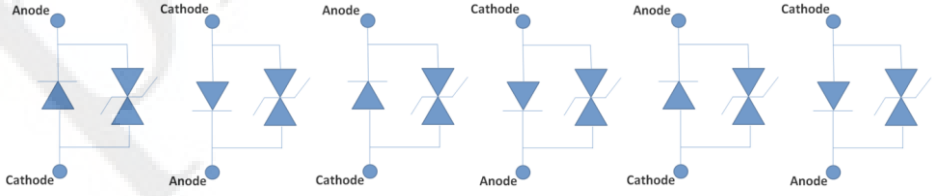
AUTOML-C0W1 (4 chips)



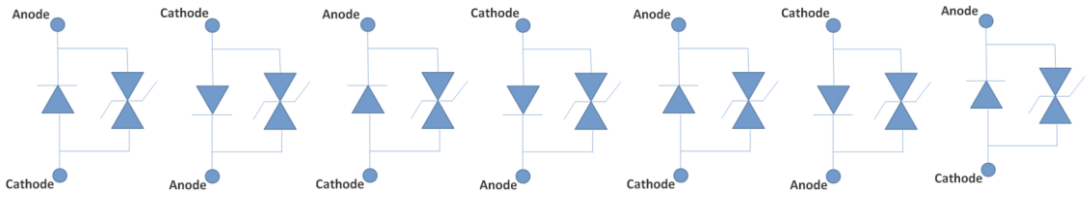
AUTOML-C0W1 (5 chips)



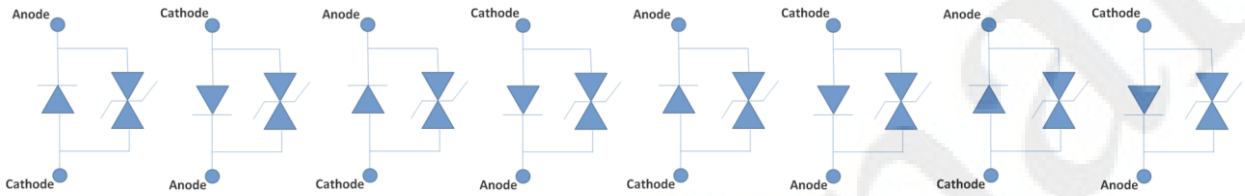
AUTOML-C0W1 (6 chips)



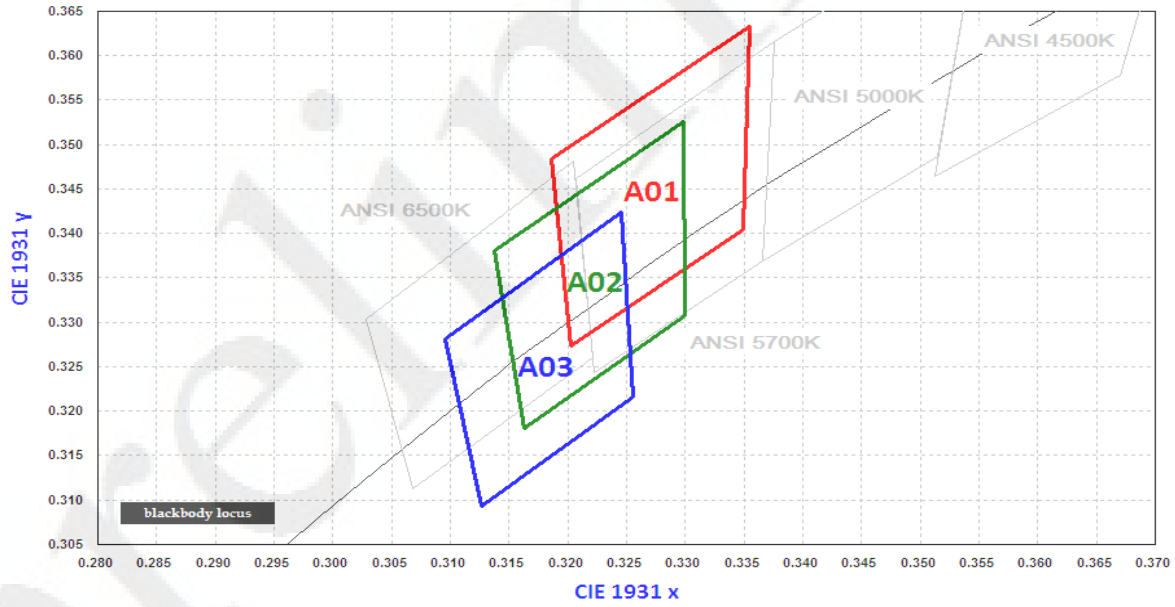
AUTOML-C0W1 (7 chips)



AUTOML-C0W1 (8 chips)



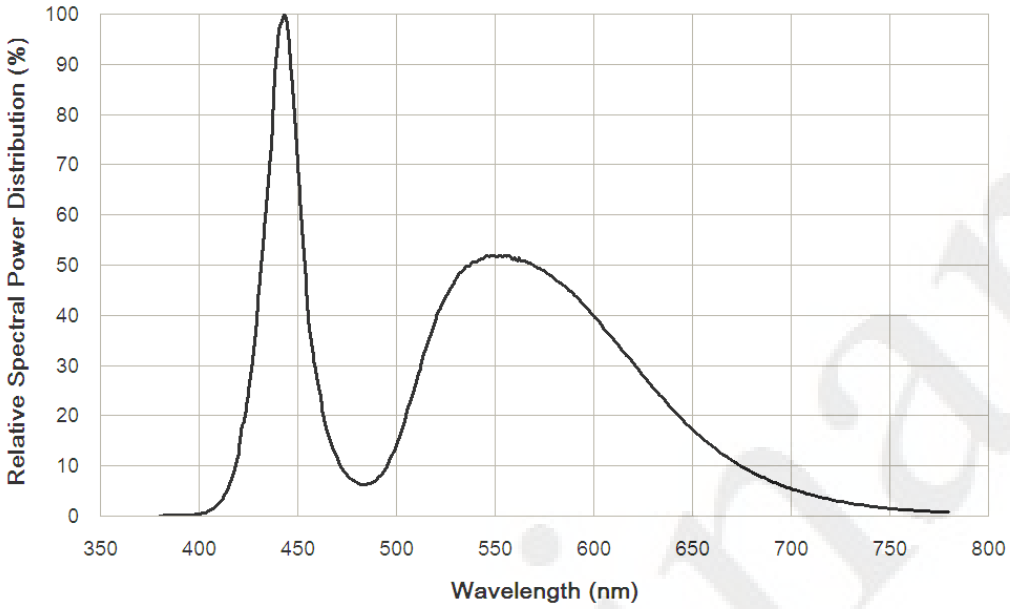
Color Bin Definitions (Tc=25˚C, 1000 mA)



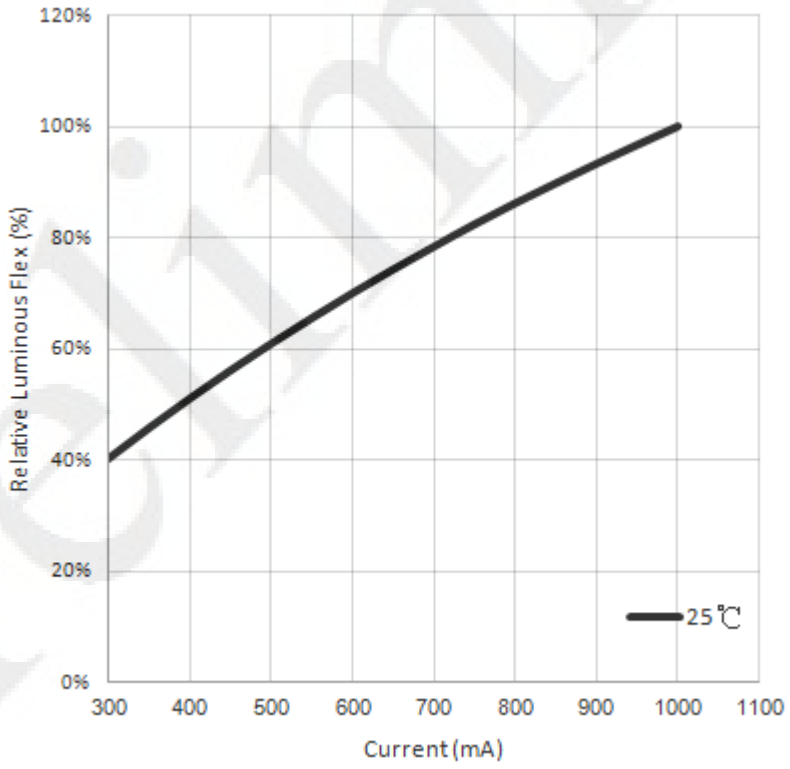
BIN Code	Typical CCT	Cx	Cy
A01	5720K	0.3186	0.3484
		0.3355	0.3633
		0.3349	0.3404
		0.3203	0.3274
A02	5970K	0.3138	0.3381
		0.3163	0.3181
		0.33	0.3308
		0.3298	0.3526

BIN Code	Typical CCT	Cx	Cy
A03	6230K	0.3096	0.3282
		0.3127	0.3093
		0.3255	0.3216
		0.3246	0.3424

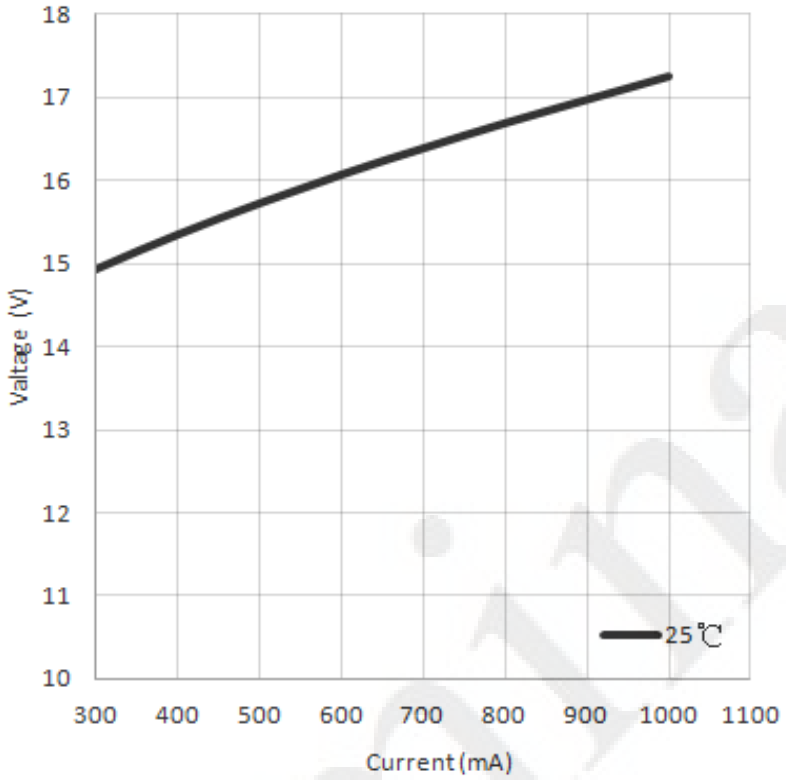
Relative Spectral Power Distribution (Tc=25°C, 1000mA)



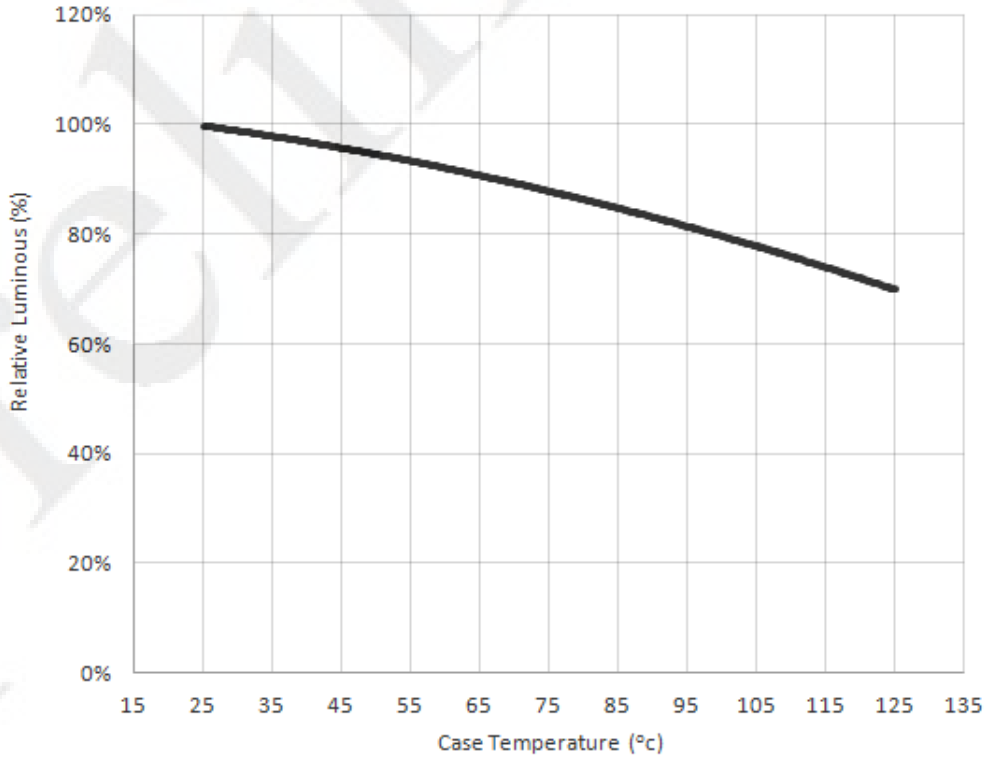
Typical Relative Luminous Flux vs. Forward Current (Tc=25℃)



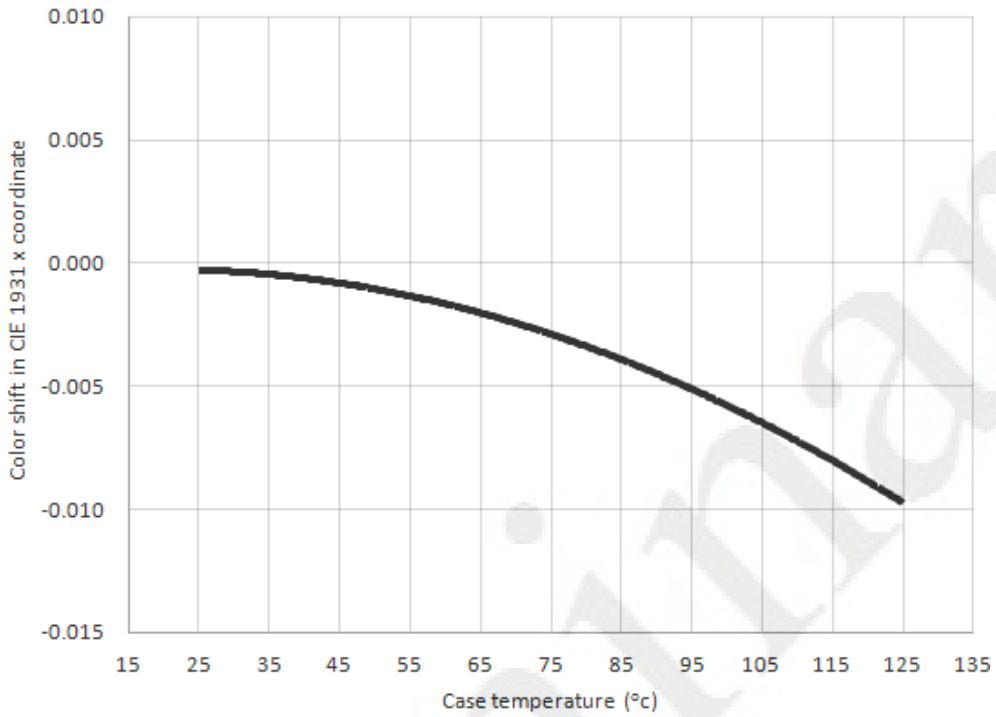
Typical Forward Voltage vs. Forward Current (Tc=25℃)

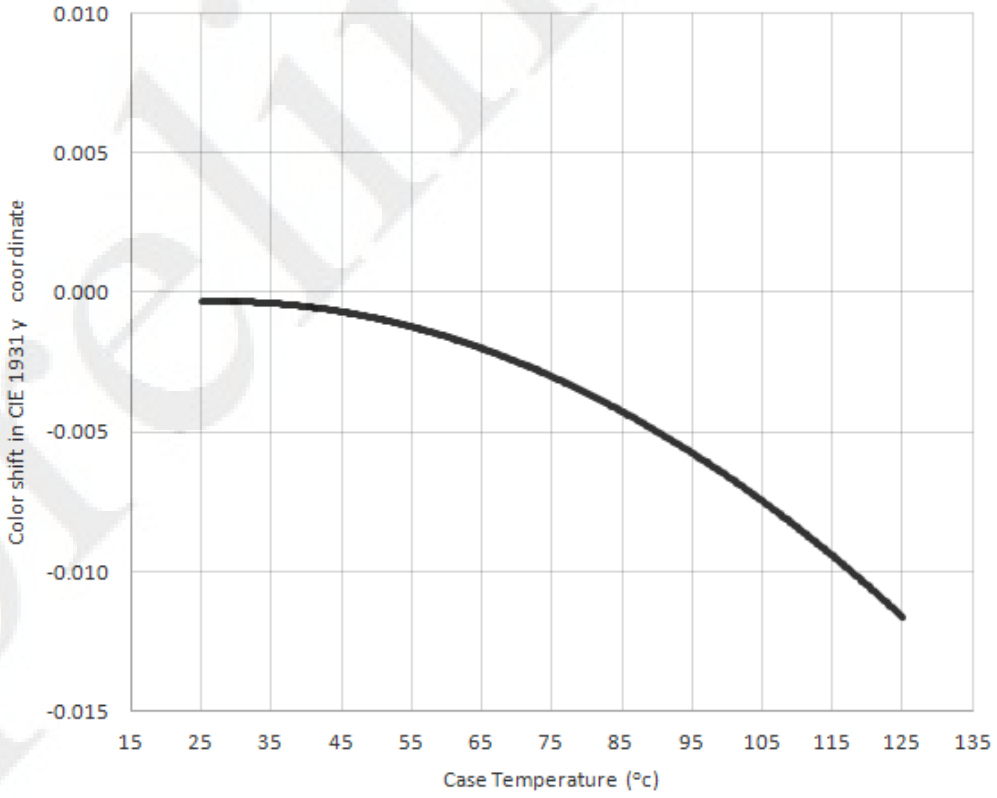


Typical Relative Luminous Flux vs. Case Temperature (Tc=25℃)

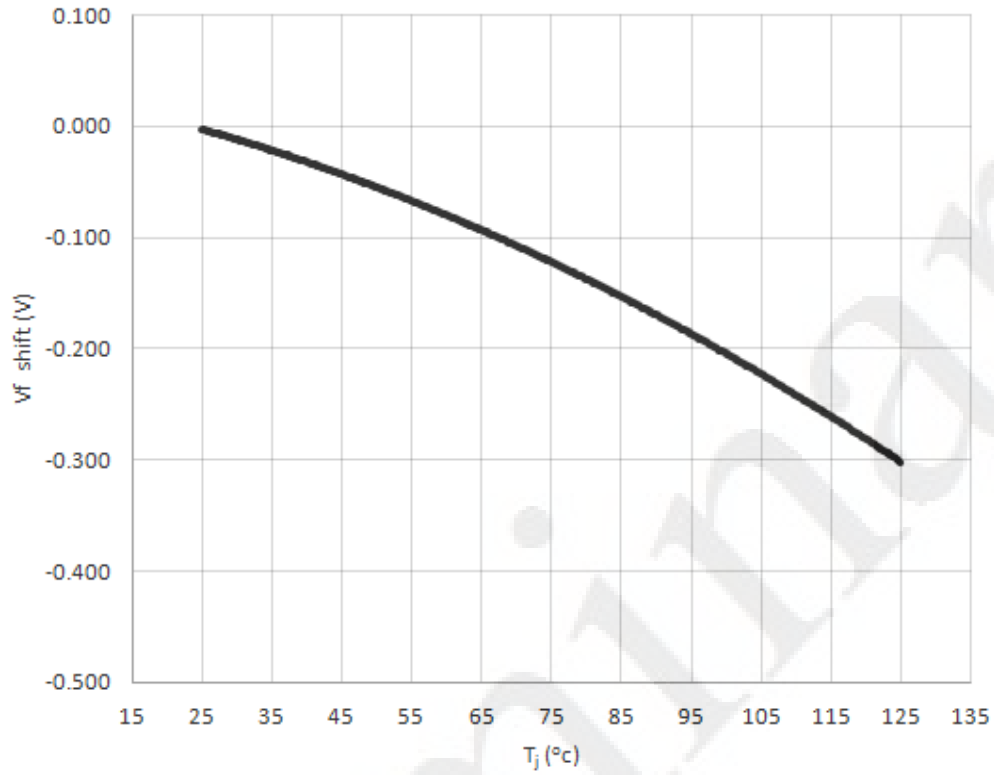


Color Shift vs. Case Temperature (1000mA)

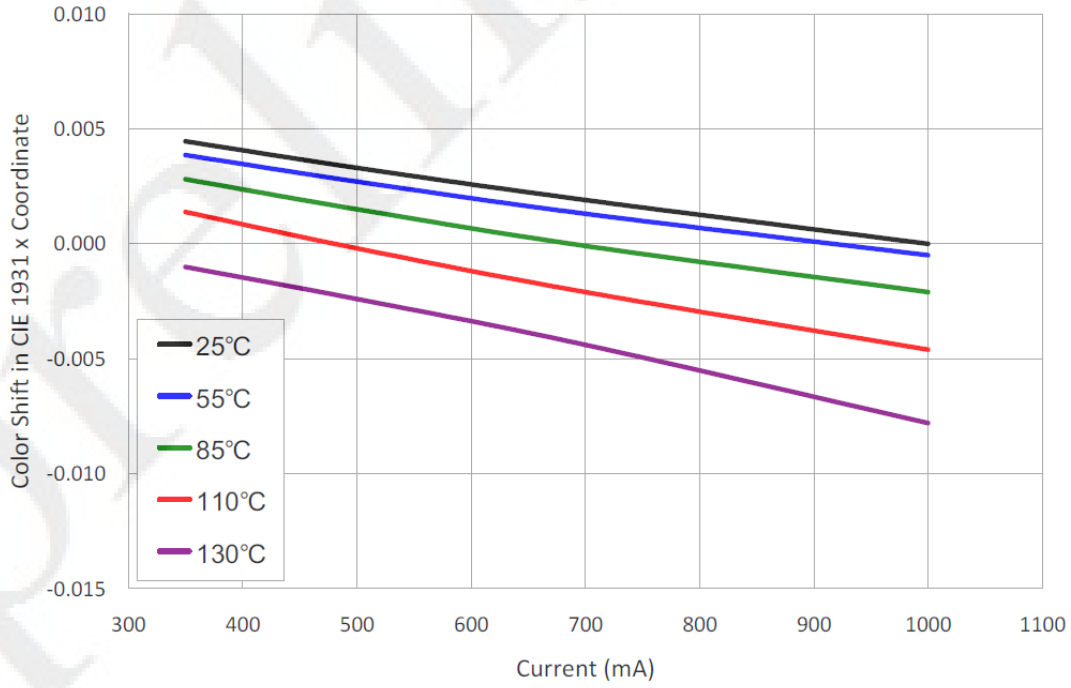




Vf Shift vs. Junction Temperature (1000mA)



Color Shift vs. DC Drive Current



About Us

TSLC Corporation is devoted to developing high-density, and multi-size emitters with powerful output to satisfy the needs of every customer.

TSLC Corporation is the leader in LED solutions. Unlimited design flexibility for interior and exterior spaces with high-end lighting effect; energy-efficient for UV curing to improve the quality of medical care; horticulture solutions create a better environment for everyone; high-intensity rotatable lightings for the entertainment industry, TSLC is always there for your lighting needs.

For further company or product information, please visit us at **www.tslc.com.tw** or please contact **sales@ tslc.com.tw.**

www.tslc.com.tw

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