



ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

<http://www.etgtech.com/>

E-Mail: info@etgtech.com

ETG-5450CERGB-18T

DATA SHEET

QC:

ENG:

Prepared By:



ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

<http://www.etgtech.com/>

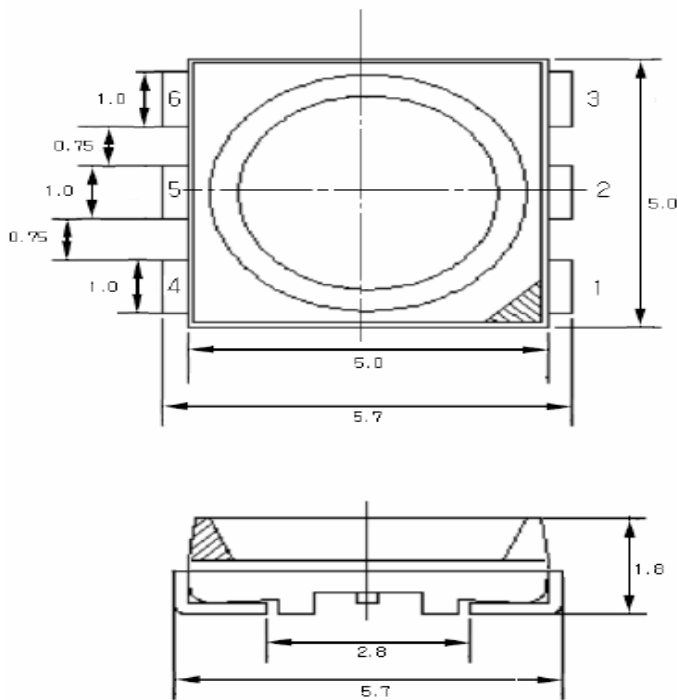
EEmail: info@etgtech.com

REFLECTOR TYPE HIGH-PERFORMANCE LEDs

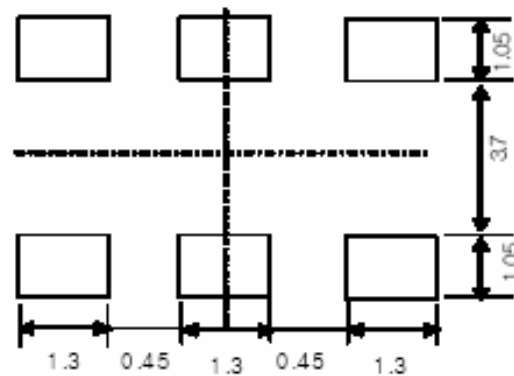
High Performance SMD Full-Color Top LEDs

Part Number: ETG-5450CERGB-18T

Package outlines



Recommended soldering pattern



Pin Connection

1. Cathode(Blue)
2. Cathode(Red)
3. Cathode(Green)
4. Anode(Blue)
5. Anode(Red)
6. Anode(Green)

ITEM	MATERIALS	
Resin (mold)	Epoxy	
Bonding Wire	Ø 25 µm Au	
Lens color	Water transparent	
Printed circuit board	BT (white)	
Dice	Red	AlGaInP
	Green	InGaN/SiC
	Blue	InGaN/SiC

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.1mm (0.004inch) unless otherwise noted.

Rev :	Date	Drawn by :	Checked by :	Approved by :
A	2005.12.2	王建明	譚文質	黃靜文

**ETG Inc.**

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

<http://www.etgtech.com/>EMail: info@etgtech.com**REFLECTOR TYPE HIGH-PERFORMANCE LEDs****High Performance SMD Full-Color Top LEDs****Part Number: ETG-5450CERGB-18T****Absolute maximum ratings****(T_A=25)**

Parameter	Symbol	Value			Unit
		R	G	B	
Power dissipation	Pd	90	120	120	mW
Forward current	If	30			mA
Reverse voltage	Vr	5			V
Operating temperature range	Top	-20 ~+80			
Storage temperature range	Tstg	-20 ~+80			
Peak pulsing current (1/8 duty f=1kHz)	Ifp	125			mA

Electro-optical characteristics**(T_A=25)**

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=20mA	R	635	640	645	nm
		G	520	522	525	
		B	460	465	470	
Spectral half bandwidth	If=20mA	R	--	21	--	nm
		G	--	40	--	
		B	--	25	--	
Dominant wavelength	If=20mA	R	--	630	--	nm
		G	525	530	535	
		B	465	470	475	
Forward voltage	If=20mA	R	--	2.0	2.5	V
		G	--	3.5	4.0	
		B	--	3.7	4.0	
Luminous intensity * 1	If=20mA	R	80	150	--	mcd
		G	160	260	--	
		B	90	120	--	
Viewing angle at 50% Iv	If=10mA	2θ1/2	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

* 1 Note: Luminous intensity tolerances are ±10 % .



ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

<http://www.etgtech.com/>

E-Mail: info@etgtech.com

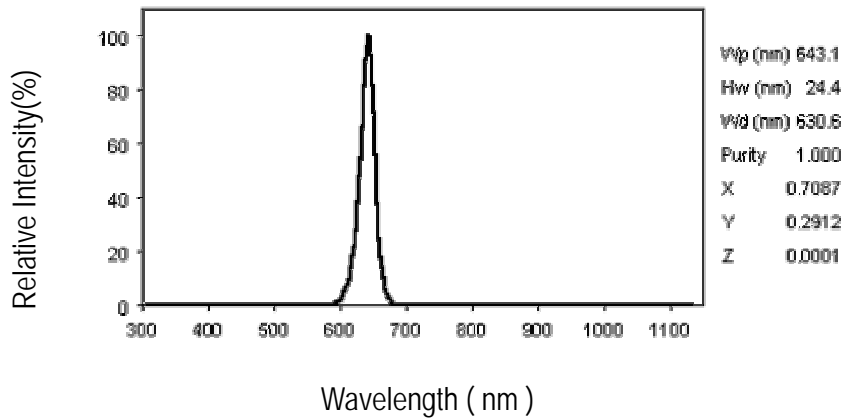
REFLECTOR TYPE HIGH-PERFORMANCE LEDs

High Performance SMD Full-Color Top LEDs

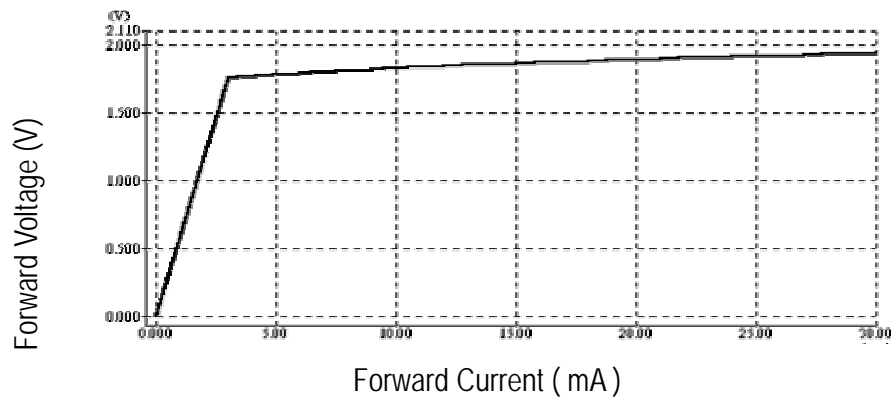
Part Number: ETG-5450CERGB-18T

OPTICAL CHARACTERISTIC CURVES (RED)

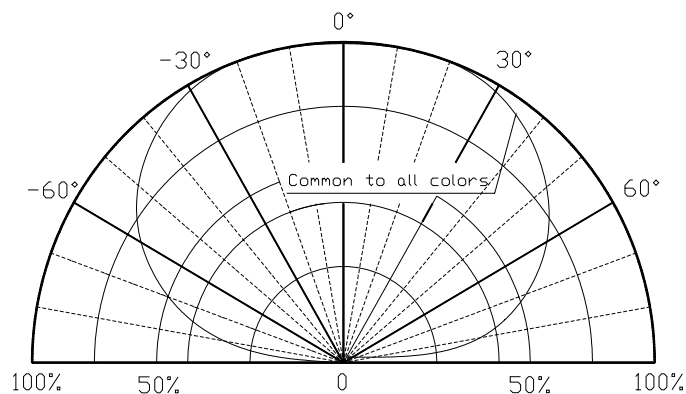
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics





ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

<http://www.etgtech.com/>

E-Mail: info@etgtech.com

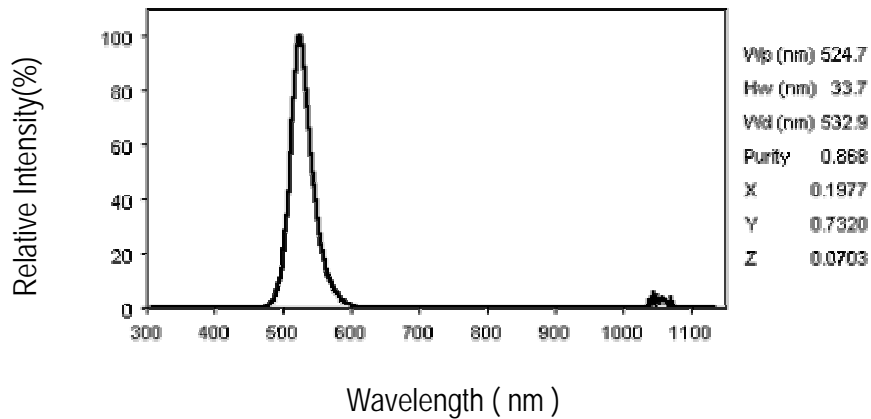
REFLECTOR TYPE HIGH-PERFORMANCE LEDs

High Performance SMD Full-Color Top LEDs

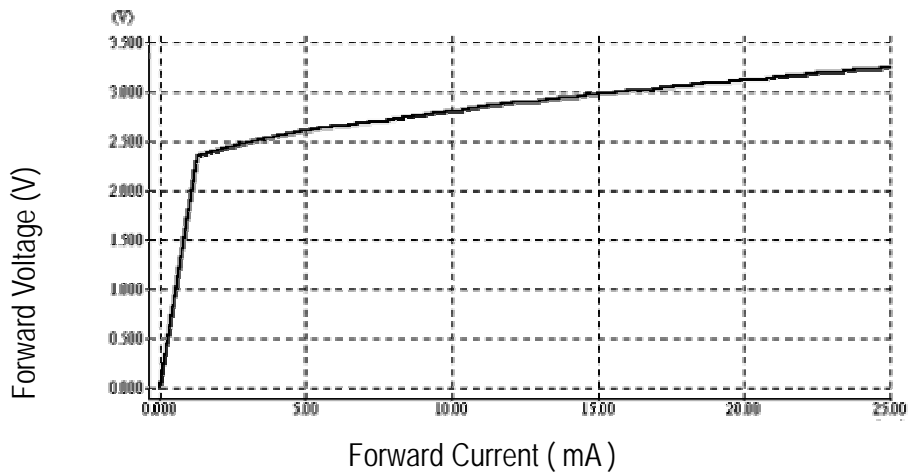
Part Number: **ETG-5450CERGB-18T**

OPTICAL CHARACTERISTIC CURVES (Green)

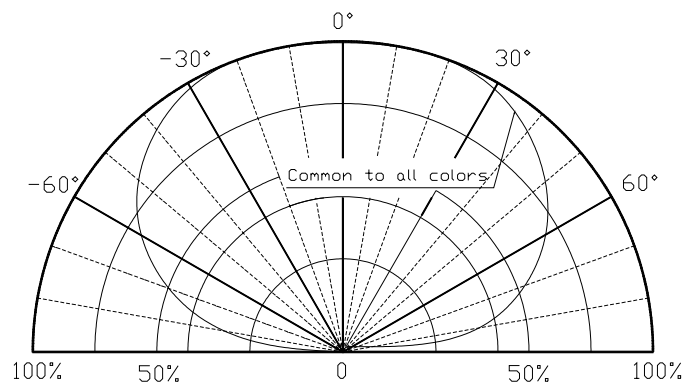
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics





ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

<http://www.etgtech.com/>

E-Mail: info@etgtech.com

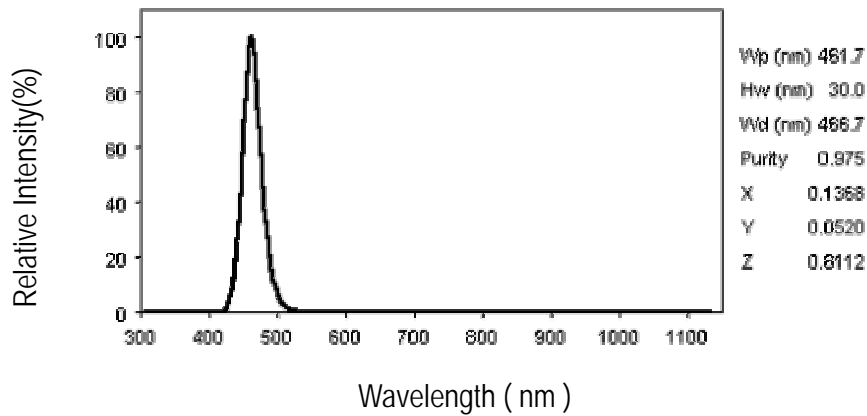
REFLECTOR TYPE HIGH-PERFORMANCE LEDs

High Performance SMD Full-Color Top LEDs

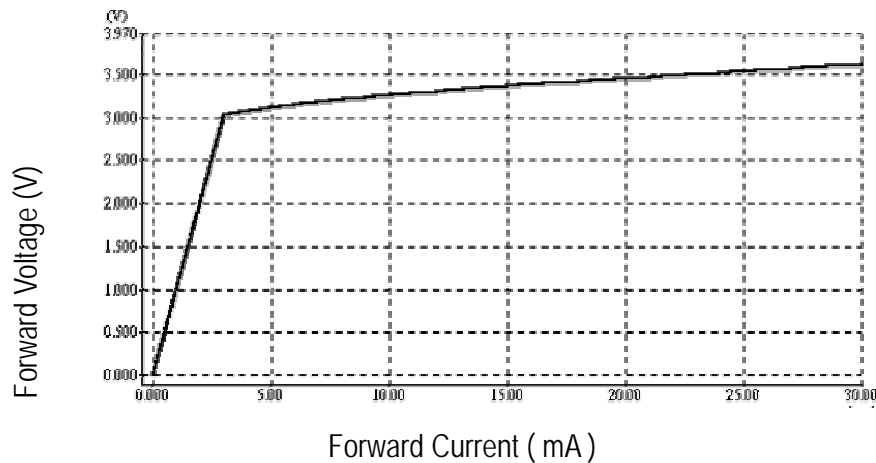
Part Number: ETG-5450CERGB-18T

OPTICAL CHARACTERISTIC CURVES (Blue)

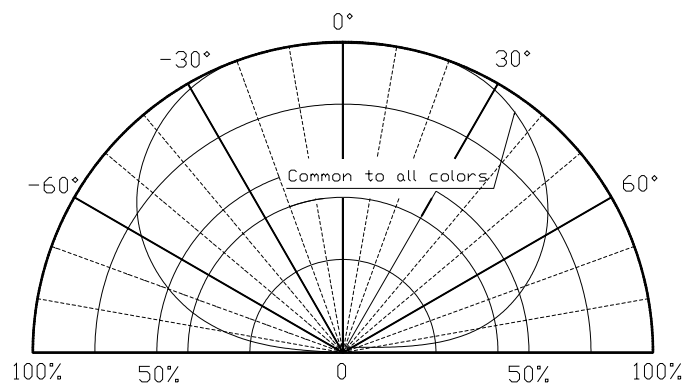
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics





ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

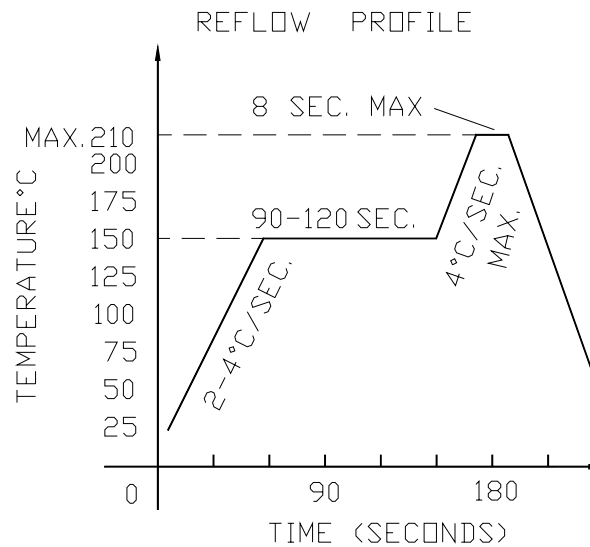
Fax: +1 (310) 202-6406

<http://www.etgtech.com/>

E-Mail: info@etgtech.com

Reflow Profile

■ Reflow Temp/Time

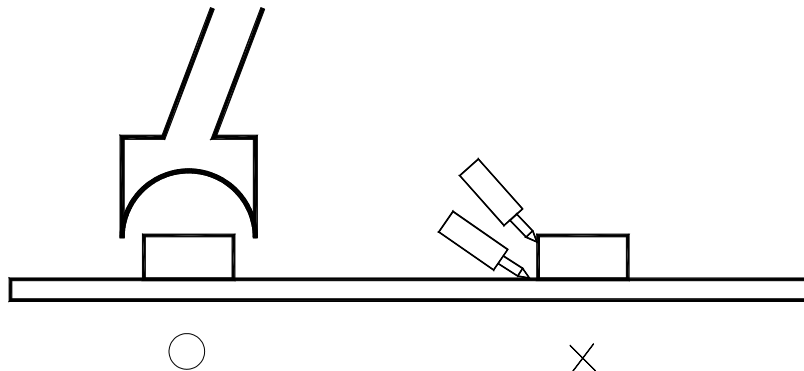


■ Soldering iron

Basic spec is ≤ 5 sec when 260 . If temperature is higher, time should be shorter (+10 \rightarrow -1sec). Power dissipation of iron should be smaller than 15W, and temperatures should be controllable. Surface temperature of the device should be under 230 .

■ Rework

1. Customer must finish rework within 5 sec under 260 .
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.





ETG Inc.

8599 Venice BLVD, Suite K, Los Angeles CA 90034, U. S. A.

Phone: + 1 (310) 202-6400

Fax: +1 (310) 202-6406

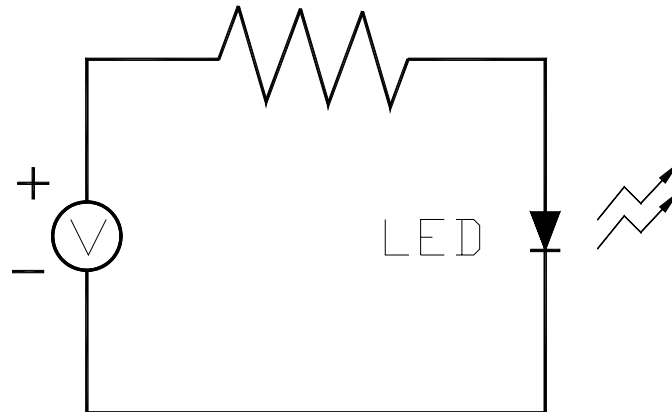
<http://www.etgtech.com/>

EMail: info@etgtech.com

SURFACE MOUNT LED LAMPS

Test circuit and handling precautions

■ Test circuit



■ Handling precautions

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2.Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature : 5 ~30 (41 ~86)

2.2 Shelf life in sealed bag: 12 month at < 5 ~30 and < 30% R.H. after the package is Opened, the products should be used within a week or they should be keeping to stored at 20 R.H. with zip-lock sealed.

3.Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings:

3.1 60±3 x(12~24hrs) and < 5%RH, taped reel type

3.2 100±3 x(45min~1hr), bulk type

3.3 130±3 x(15~30min), bulk type

When you discover that the desiccant in the package has a pink color (normal=blue), you Should treat them in the same conditions as (3.1~3.3)