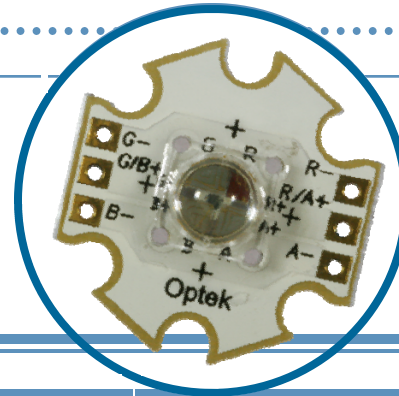


Optimal IV Star Series

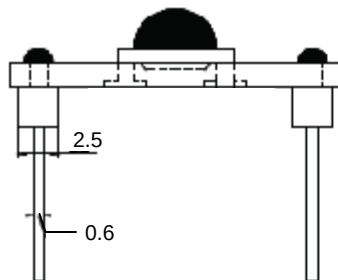
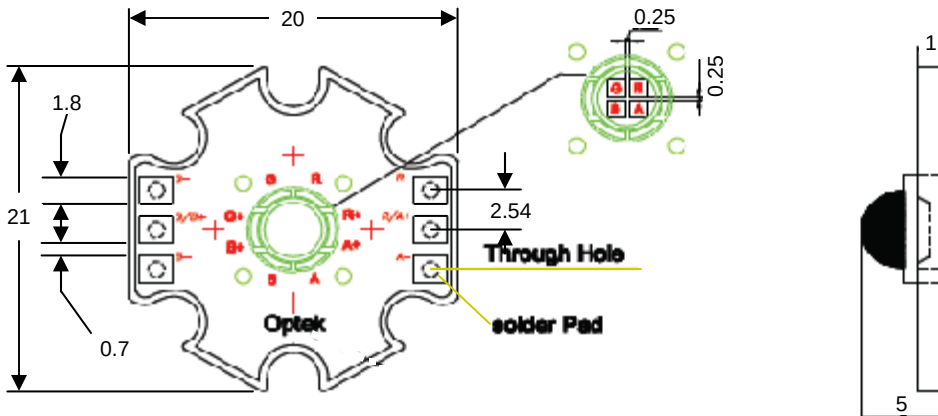
Multi-LED Recessed Die Design (RDD)

OV4ZRGBA

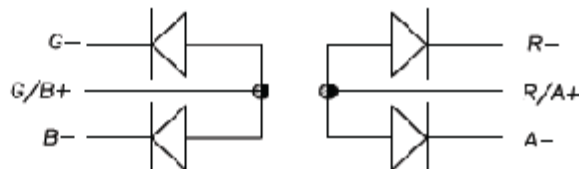
- Designed for 4 1-watt chips in recessed cavity with an optical grade 5mm diameter lens
- Exceptional thermal resistance ($< 2^{\circ} \text{C/W}$ junction to heatsink)
- Soldering points or pins provided for electrical connections
- Terminal pin optional. Contact Optek Sales for details.



Part Number	Viewing Angle	Emitted Color	Typical Luminous Flux (lm)		Typical Forward Voltage (V) @ 350mA
			350 (mA)	700 (mA)	
OV4ZRGBA	60°	Blue 455-460nm	5	9	3.6
		Green 530-535nm	30	45	3.9
		Red 620-630nm	35	75	2.5
		Amber 585-595nm	36	55	2.5



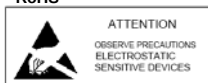
Terminal Pin Option



Notes: (1) Al base layer: clear anodized
(2) Dielectric layer thickness: $0.2\mu\text{m} \pm 20\%$



RoHS



Notes:

- Test conditions: $I_F = 350\text{mA}/700\text{mA}$; $T_J < 130^{\circ}\text{C}$
- All dimensions are in millimeters.

**DO NOT LOOK DIRECTLY
AT LED WITH UNSHIELDED
EYES OR DAMAGE TO
RETINA MAY OCCUR.**

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

Optimal IV COS Star Series

OV4ZRGBA



Absolute Maximum Ratings

DC Forward Current /die	700 mA
Peak Pulsed Forward Current ¹	6.0 A
Reverse Voltage	5 V
Maximum Allowable Junction Temperature ²	130° C
Storage and Operating Temperature	-50° ~ +100 ° C

Notes:

1. Pulse width 1 ms maximum. Duty cycle 1/16.
2. Thermal Resistance junction to Board (T_{jhs}) is <2° C/W

Electrical Characteristics ($I_F = 350$ mA , $T_J = 25^\circ$ C)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_F	Forward Voltage (Amber)		2.5		V
	Forward Voltage (Blue)		3.6		V
	Forward Voltage (Cyan & Green)		3.9		V
	Forward Voltage (Red)		2.5		V
	V_F -Temperature Co-efficient (Amber & Red)	----	-6.42	----	mV/°C
	V_F -Temperature Co-efficient (White & Blue)	----	-4.81	----	mV/°C
	V_F -Temperature Co-efficient (Cyan & Green)	----	-4.95	----	mV/°C

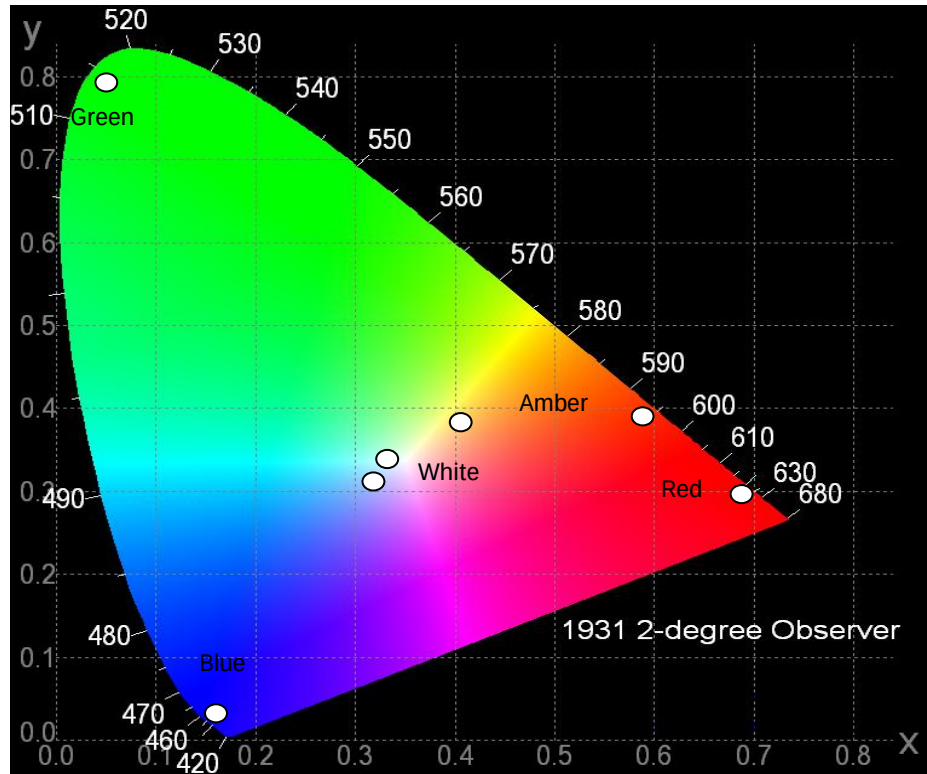
Optical Characteristics ($I_F = 350$ mA/die , $T_J = 25^\circ$ C)

COLOR	DOMINANT WAVELENGTH			SPECTRAL FULL-WIDTH HALF-MAXIMUM	DOMINANT WAVELENGTH TEMPERATURE DEPENDENCE
	MIN	TYP	MAX		
Amber	585	590	595	16 nm	0.07 nm/° C
Blue	455	458	460	20 nm	0.044 nm/° C
Green	530	532	535	40nm	0.04 nm/° C
Red	620	625	630	37 nm	0.05 nm/° C

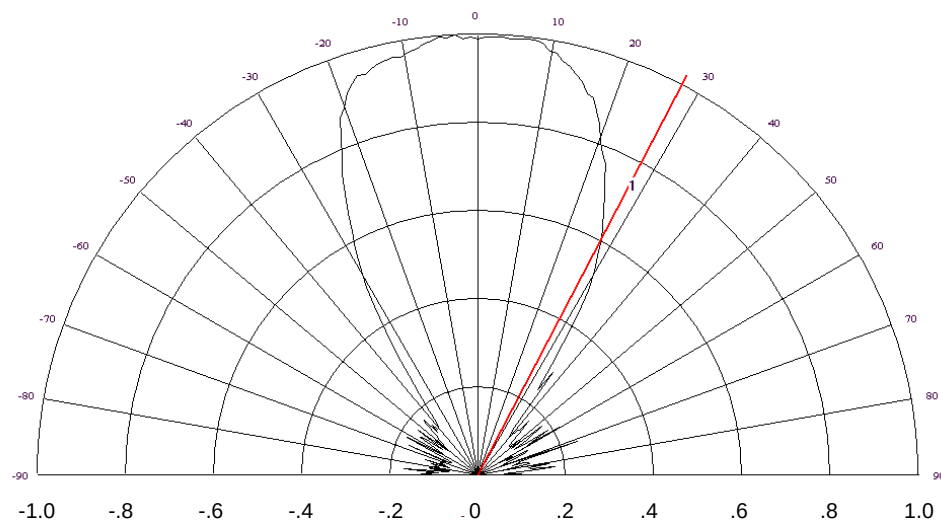
OPTEK's Solid State Lighting products package the highest quality LED chips. Typically, the lumen output of these can be as high as 70% after 50,000 hours of operation. This prediction is based on specific test results and on tests on similar materials, and relies on strict observation of the design limits and ratings included in this data sheet.

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CIE Chromaticity Diagram



Spatial Intensity Distribution



Normalized Spectral Intensity vs Angular Displacement

60.1 degrees

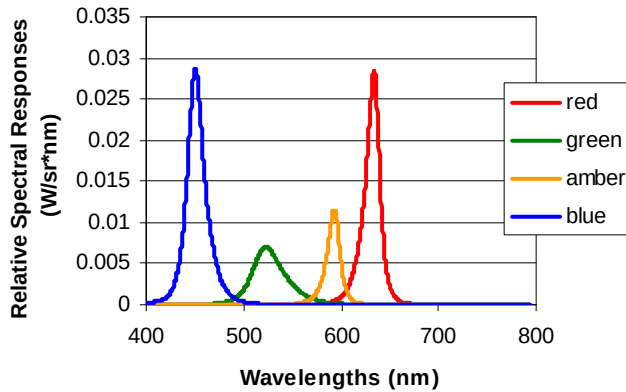
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Optimal IV COS Star Series

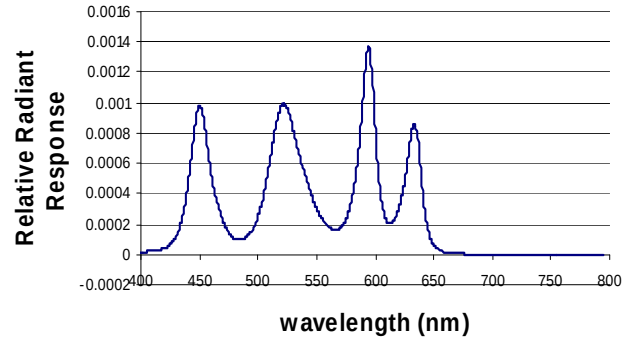
OV4ZRGBA



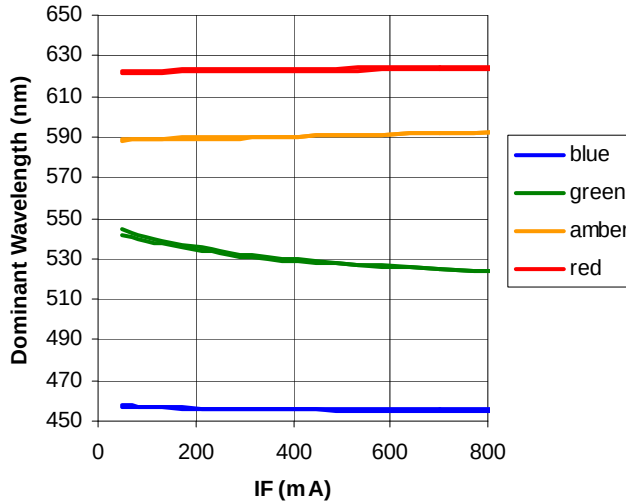
Relative Spectral Responses@ 350mA / die



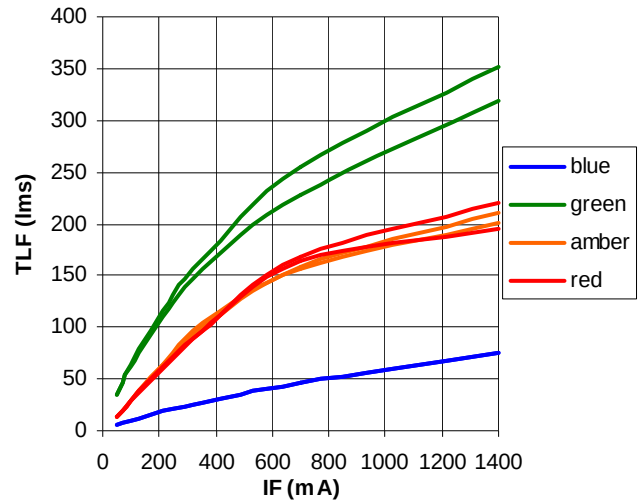
Spectral Responses for CRI 90
(varied RGBA I_F Drives)



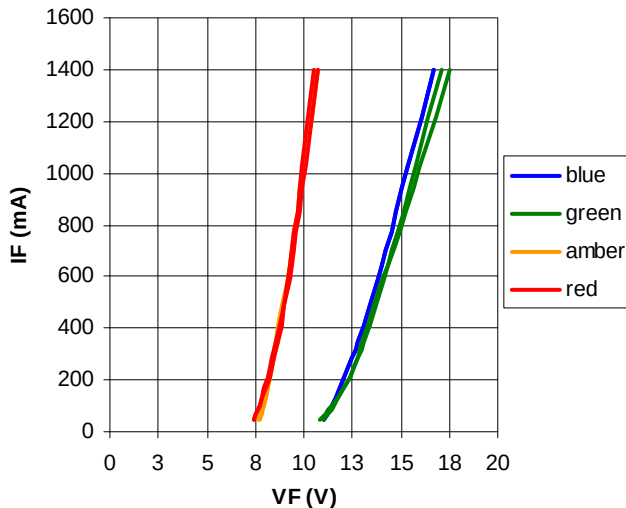
Dominant Wavelength vs IF



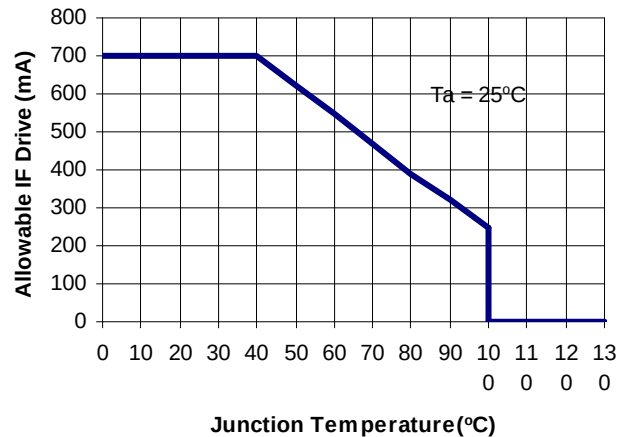
Total Luminous Flux vs IF



IF vs VF



Derating Curve/die



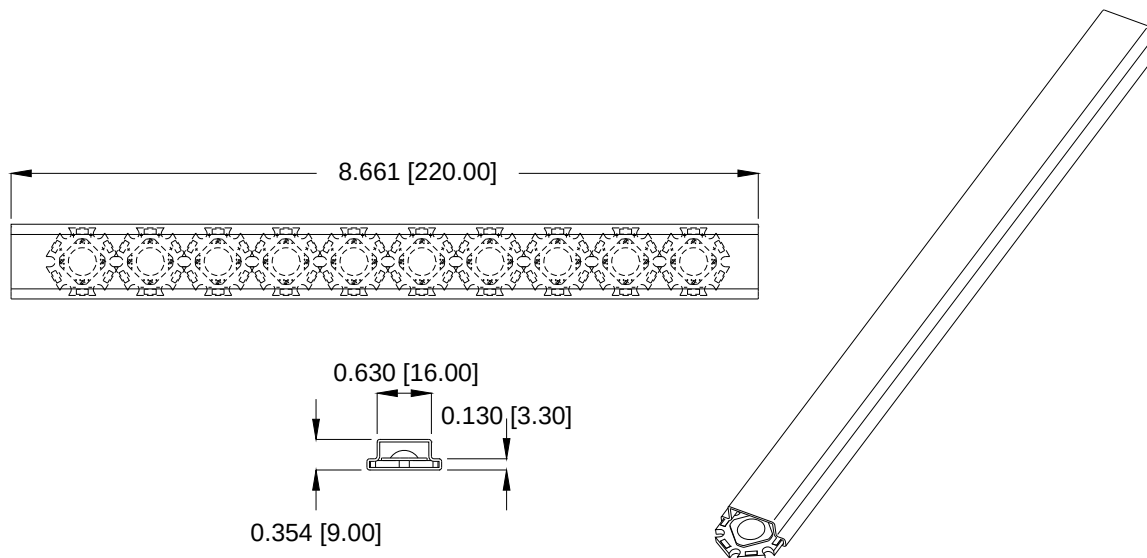
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Optimal IV COS Star Series

OV4ZRGBA

Shipment Packaging and Packing:

1. Packaging quantity : 10 stars / tube
2. Packing box contains 10 tubes
3. Shipment of 10 Packing Boxes in Cardboard Box (26.5 mm x 34.5 mm x18 mm)



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