J&K Series High Efficiency and Super Bright LED LAMPS

J & K Series General Information

IDEA J&K series LED products are made from a light emitting semiconductor material which is being continually improved and developed. The LED (light emitting diode) chip, or die, determines the wavelength of the light emitted. The epoxy package determines the shape and size of the lamp or display, and optically modifies the light distribution. The part numbers listed in these pages represent some of the more commonly used items, but by no means all possible combinations. Visual appearance and economic considerations are the basic limitations for the more uncommon combinations.
IDEA invites you to discuss any application concepts which would better fit your specific production needs.

Readily available J&K series LED colors include several reds, orange, yellow and green. To simplify color chip designation IDEA uses the following letters for the different chip materials available. This letter appears in the part number directly after the J or K:

Color	Peak Wavelength	Chip Material	Designated By
Red	632 nM	AlInGaP	R
Red	639 nM	AlInGaP	E
Deep Red	650 nM	AlInGaP	D
Green	575 nM	AlInGaP	G
Yellow	591 nM	AlInGaP	Y
YellowOrange	611 nM	AlInGaP	YO
Orange	621 nM	AlInGaP	O

Performance Parameters:

ABSOLUTE MAXIMUM RATINGS @ T= 25°C

Parameter	R	E	D	G	Y	YO	O	Unit
Power dissipation per chip	60	60	60	60	60	60	60	mW
Continuous forward current per chip	25	25	25	25	25	25	25	mA
Peak forward current per chip (1/10 duty cycle, 1 khz)	160	160	160	160	160	160	160	mA
Reverse voltage per chip	5	5	5	5	5	5	5	V
Electrostatic Discharge (ESD)	2000	2000	2000	2000	2000	2000	2000	V
Operating & storage temperature range	-40 °C to +85 °C						-40 °C to +90 °C	
Soldering temperature	5 seconds at 230 °C, 1/16 inch from mounting plane.							

ELECTRO-OPTICAL CHARACTERISTICS (@T = 25°C AND IF = 20 MA EXCEPT AS NOTED.)

Parameter	R	E	D	G	Y	YO	O	Unit
Forward voltage per chip (Vf)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	V
Max forward voltage/chip	2.4	2.4	2.4	2.4	2.4	2.4	2.4	V
Peak wavelength (λ)	632	639	650	575	591	611	621	nM
Spectral band width ($\Delta\lambda$)	20	20	20	20	15	17	18	nM
Reverse current @Vr = 5 volts.	10 µA max.							