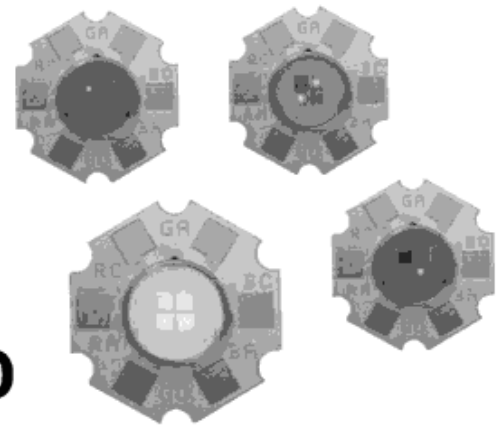


ROITHNER LASERTECHNIK

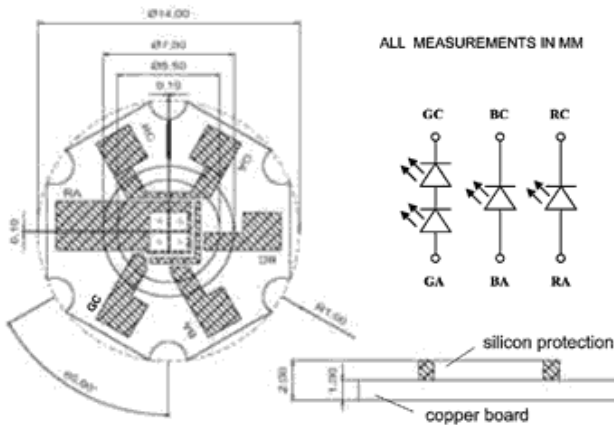
High Brightness RGB LED



PCR-RGB-4-xxx

MADE IN GERMANY

12/2004



Features

- Excellent colour mixing by individual driving of each chip
- One blue, one red and two green powerchips
- Close individual placement produces an exquisite white colour mix
- Separate anode and cathode for each colour
- Two green dice connected in serial
- Copper board for superior thermal management
- Up to 4,5W electrical power

Applications

- The tunable RGB LED is an high power light source for general illumination
- Typical applications are e.g. Vision systems, architectural lighting, backlighting, displays, signs
- Additional optics are easily attached

OPTICAL AND ELECTRICAL CHARACTERISTICS ambient temperature = 25°C

Parameter	Symbol	RED	GREEN	BLUE	Unit
Dominant wavelength* @ 350mA	λ_{dom}	(0) 620-630	(0) 515-530	(0) 455-465	nm
		(1) 620-630	(1) 520-525	(1) 460-465	nm
			(2) 515-520	(2) 455-460	nm
			(3) 525-530		nm
Spectral bandwidth @ 350mA	typ. $\Delta\lambda$	30	45	30	nm
Forward voltage @ 350mA	typ. V_f	2.5	7.0	3.6	V
	max. V_f	3.0	9.0	4.5	V
Optical efficiency @ 350mA	typ. η_{opt}	16	11	2	lm/W
	@ 50mA	typ. η_{opt}	25	23	5
Luminous intensity @ 350mA	min. I_v	5000	6000**	2000	mcd
Luminous flux @ 350mA	typ. Φ_v	12.5	26	2.5	lm

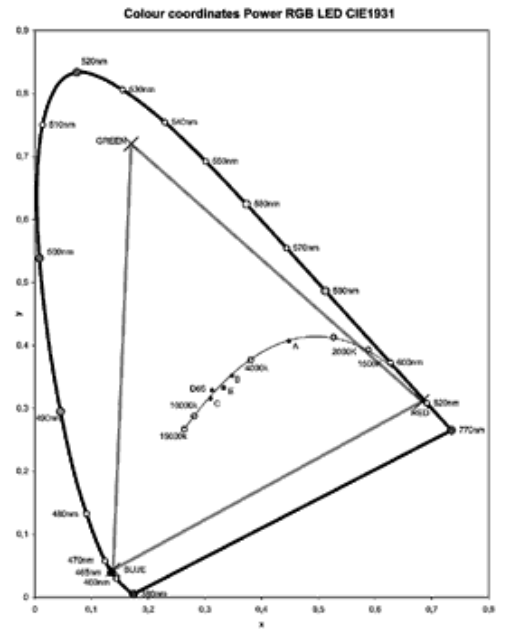
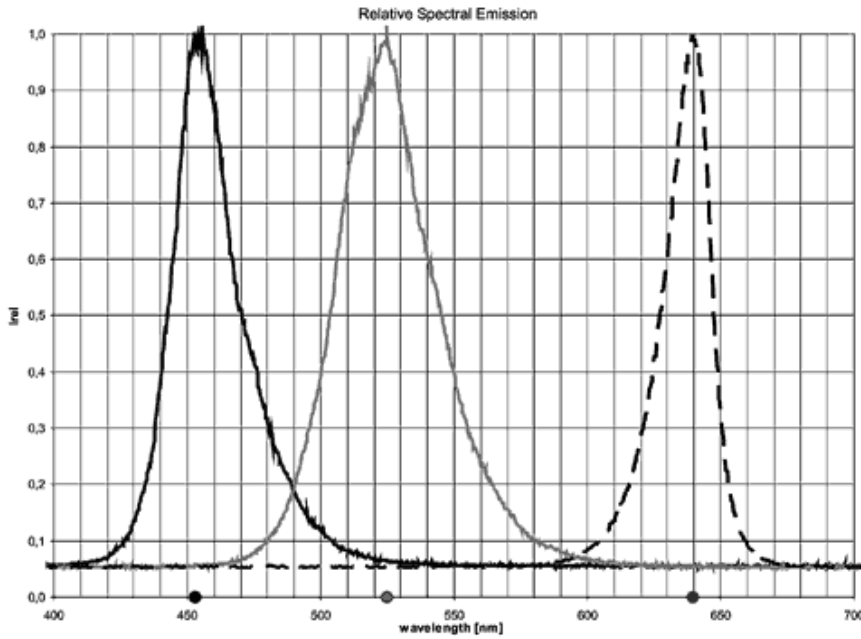
*binning: (0) = standard, (1) = main binning

Adequate heatsink is required. Derating must be observed to maintain junction temperature below maximum.

**for each powerchip

Note: according IEC 60825-1 (EN 60825-1)

LED Radiation class 1M LED product
Do not view directly with optical instruments



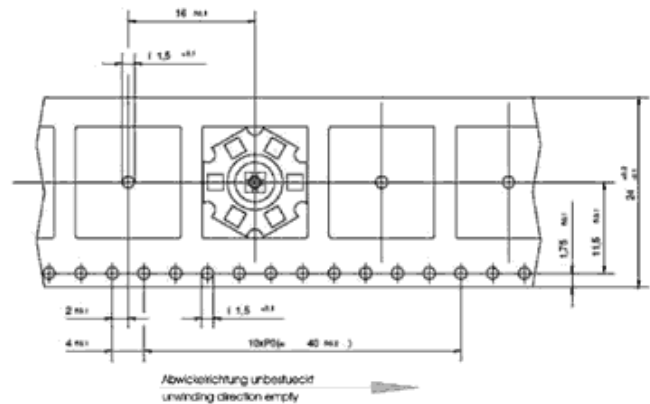
MAXIMUM RATINGS @25°C

Operating temperature range
 Storage temperature
 Junction temperature
 Forward current per colour
 Surge current per colour
 Reverse voltage
 Power consumption

RED, BLUE
 GREEN
 RED
 GREEN
 BLUE

Symbol	Values	Unit
T_{op}	-40 to 100	°C
T_{st}	-40 to 100	°C
T_j	120	°C
I_F	350	mA
I_{FM}	700	mA
V_R	5	V
V_R	10	V
P_{tot}	1.05	W
P_{tot}	3.2	W
P_{tot}	1.6	W

Taping on request:
 standard 24mm blister tape



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