



High Power UV-C LED
SMD Modules and Arrays

V0.9 March 2019

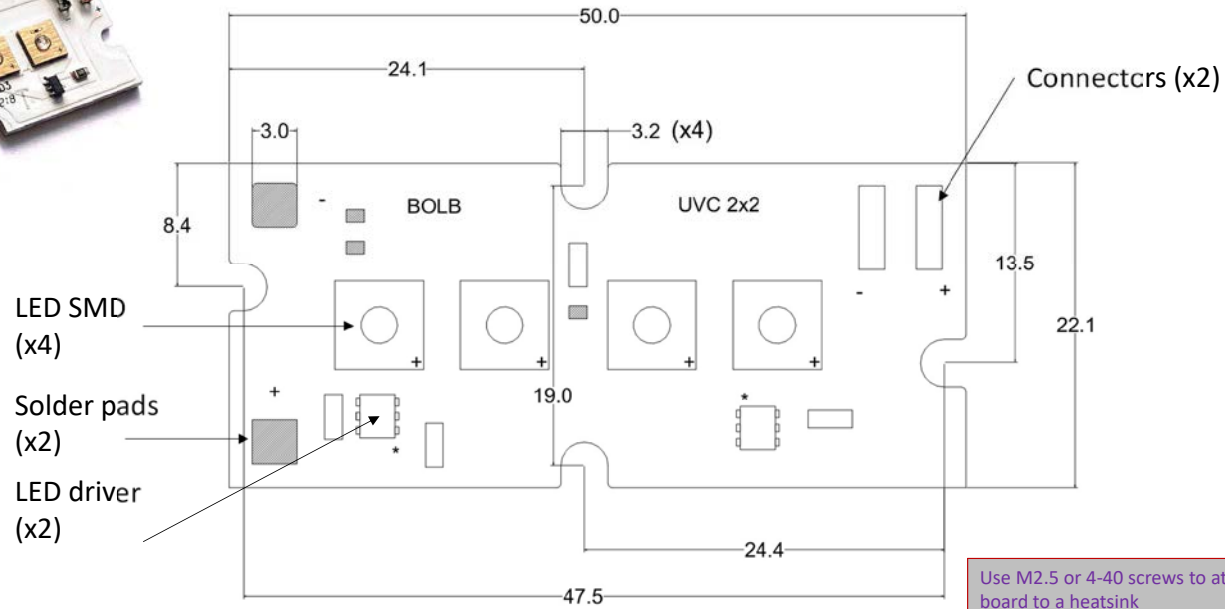
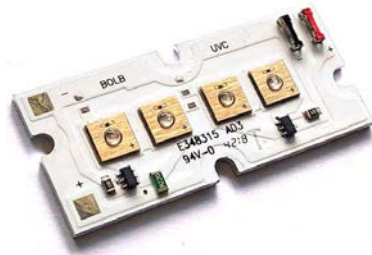
03/20 / V05 / OSIF / bolb/1x4_array_uv_c_smd_led_module

PLEASE OBSERVE UVC SAFETY PRECAUTIONS
PROTECT YOUR EYS AND SKIN FROM UVC EXPOSURE
ALL OPERATORS, OBSERVERS AND NEARBY PERSONNEL MUST BE PROTECTED



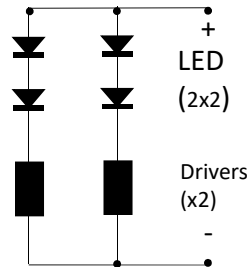
BOLB INC IS NOT RESPONSIBLE FOR ANY HARM CAUSED BY
NEGLIGENCE IN SAFTY BY THE USERS

BOLB UVC Quad SMD LED Module Diagram (mm)

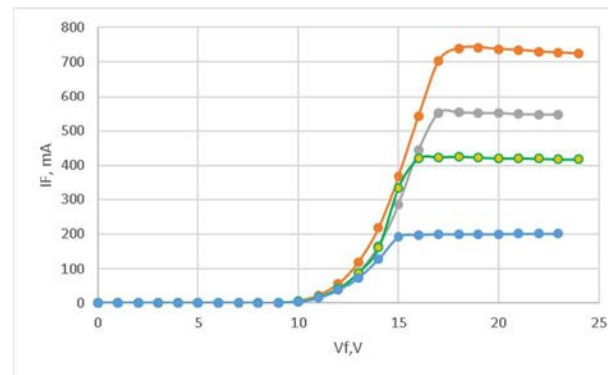


Use M2.5 or 4-40 screws to attach board to a heatsink
 Thermal compound required between back of PCB and heatsink
 Wire connection AWG-25 or AWG-24

Schematic Electrical Connections
Quad SMD = 2p x 2s



Driver I-V Can Be Set According to Customer Requests



Notes

1. Active liquid cooling required for operation at $\geq 100W$.
2. Thermal paste required to mount PCB onto heatsink
3. Power supply- 32-40V DC, 3A with voltage stabilization.
4. PCB has 2 connectors (wires AWG-24 or 25) for connection to power supply. No soldering required.
5. Option: a fused silica protective cover

2p x 2s SMD LED Module Performance at 25°C Ambient and Active Cooling

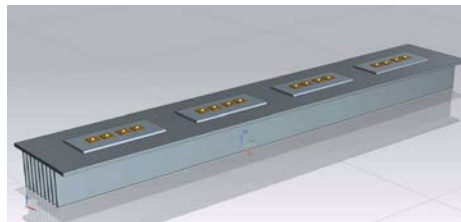
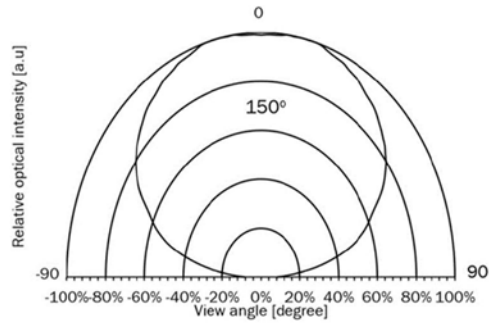
Standard drive current = 350mA per chip

Parameter	Symbol	Unit	Min.	Typ.	Max
Peak Wavelength	λ_p	nm	265	270	275
Radiant Flux	ϕ_e	mW	320*	360*	400*
			450**	500**	600**
Forward Voltage	V _F	V	15	16	19
Forward Current	I _F	A	0.2	0.6	0.7
Spectrum Half Width	$\Delta\lambda$	nm	-	11	-
View Angle	2 $\theta_{\frac{1}{2}}$	°	-	150	-
Thermal Resistance	R _{J-b}	°C/W	-	<10 (TBD)	-

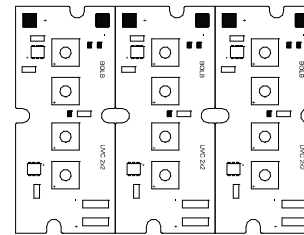
*G1N
** G2H

SMD LED Emission Patterns

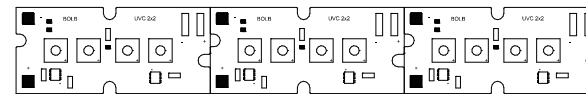
Broad Emission Angles for Wide-area Coverage



Parallel Assembly



Longitudinal Assembly



Example: Longitudinal Assembly Lamp design (all sizes in mm)

