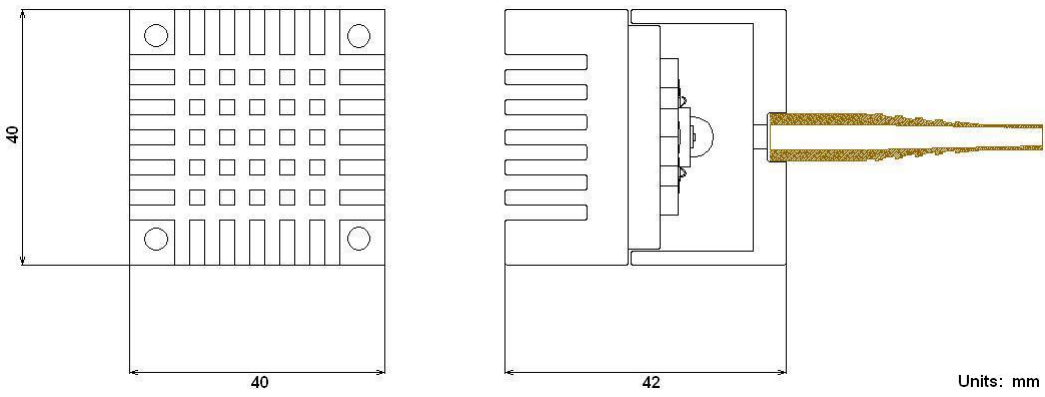


Fiber Pigtail LED - Luxeon™ III Star

We have developed a compact package to couple Luxeon™ III Star LED into different types of optical fibres. Our packages include an efficient aluminium heatsink to ensure LED thermal stability.

For technical specifications about LEDs please consult www.luxeon.com. For optical fiber please consult specialized fiber optics sites. This novel micro-optic approach is well suited for coupling LEDs into multimode optical fibers. The coupling efficiency is dependent on diode type, fiber core diameter and its NA.

Applications includes all kinds of illumination application, night vision and military in general, sensors, robotics, medical applications, industrial, telecom (fiber faults locators) etc.

WEBCODE:		D168-xxx	
DRAWING			
			
Units: mm			
SPECIFICATIONS	SYMBOL	VALUE	
LED type		Luxeon III Star	
Typical Operating Current	I_o	700 mA	
Foward Voltage	V_F	3.03 – 4.47 V	
Available Color		see TABLE 1	
Available Fiber		ANY multimode fiber - see TABLE 2 for most common	
Fiber Jacket		3 mm protective jacket	
Fiber Length	L	standard : 1 meter	
Available Connectors		SMA - FC/PC - ST - cleaved end	
Optical Power		see TABLE 3	
Dimensions		40 x 40 x 42 mm	
Heatsink		Aluminium	
Weight		100 grams	
NOTE		other conficurations available upon request	

NOT COMPLETE – WORK IN PROGRESS – 19.12.2007

LED COLOR	λ_c
Royal Blue	455 nm
Blue	470 nm
Cyan	505 nm
Green	530 nm
Amber	590 nm
Orange	617 nm
Red	627 nm
White	5500 K

TABLE 1. Central wavelength vs color

FIBER	ϕ_{core} (mm)	NA
MM050-022	50	0.22
MM105-022	105	0.22
MM200-037	200	0.37
MM400-037	400	0.37
MM600-037	600	0.37
PF250-050	250	0.50
PF500-050	500	0.63
PF1000-050	1000	0.50

TABLE 2. Standard available fibers

LUXEON™ III STAR LED			OUTPUT POWER @ 700 mA [mW]							
COLOR	λ_c (nm)	P_o (mW)	MM050-022	MM105-022	MM200-037	MM400-037	MM600-037	PF250-050	PF500-050	PF1000-050
Royal Blue	455	340	0,023	0,150	0,75	3,0	8,3	2,20	8,2	28,4
Blue	470	153	0,016	0,078	0,45	1,8	4,5	1,10	4,1	16,0
Cyan	505	160	0,009	0,035	0,19	0,8	2,3	0,51	2,0	7,0
Green	530	128	0,009	0,043	0,25	1,0	2,5	0,58	2,2	8,8
Amber	590	113	0,003	0,014	0,07	0,3	0,7	0,18	0,7	2,6
Orange	617	594	--	0,037	0,24	1,0	3,4	0,69	2,2	8,3
Red	627	537	--	0,045	0,28	1,1	3,7	0,74	2,4	9,6
White	5500 K	65 lumens	--	--	--	--	--	--	--	--

TABLE 3. Typical output power vs fiber type and Luxeon III Star LED color