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FC-LED Multi-Wavelength Fiber Coupled LEDs

Introduction

The fiber-coupled high power UV, Violet, Blue, Green, Yellow, Red and NIR LED multi wavelength light source modules are effective replacements of lasers and lamps in many applications, such as spectroscopy, bio-illumination and point curing.

Currently available models are FC2-LED, FC3-LED, FC5-LED, FC10-LED (only with USB control). Single channel module is also available.

Each LED has separate current driver with discrete controls. The driver supports CW and pulsed operation mode.

For each LED channel manual power control is provided by 10 turns potentiometer with counting dial. For computer control optional USB port is provided.



Key Features

- High output power (see table below)
- SMA fiber connection
- Precisely adjustable power by 10 turns potentiometer
- TTL external modulation input (up to 50KHz)
- Analogue input (0-5V) for power control
- TTL and Analogue input are optically isolated
- Low optical noise <0.05% RMS
- Long life (no lamp replacement required)

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Optical Specifications

Product P/N	Peak λ [nm]	Centroid λ [nm]	FWHM [nm]	Fiber-A [mW]	Fiber-B [mW]	Fiber-C [mW]
FC-LED-270C	272	273	19	3.7	-	-
FC-LED-280L	280	281	16	3.1	-	-
FC-LED-285L	284	284	16	3.1	-	-
FC-LED-310D	310	315	16	3.3	-	-
FC-LED-325D	327	328	12	6.2	-	-
FC-LED-340A	344	347	12	22	21	21
FC-LED-365A	369	371	12	160	260	260
FC-LED-375A	374	376	12	140	200	210
FC-LED-395A	394	395	12	210	250	350
FC-LED-405A	404	405	16	260	340	410
FC-LED-410Z	409	410	17	120	120	150
FC-LED-415Z	416	416	15	110	155	230
FC-LED-420Z	421	422	16	130	180	220
FC-LED-425Z	423	425	17	115	125	190
FC-LED-430M	430	430	18	85	115	130
FC-LED-430T	427	428	21	62	76	100
FC-LED-435K	433	433	18	40	55	65
FC-LED-445B	444	446	23	73	80	160
FC-LED-445HR	446	449	23	215	280	250
FC-LED-450HR	453	456	31	200	260	245
FC-LED-455Z	455	456	32	130	170	183
FC-LED-465CA	465	467	29	47	50	100
FC-LED-470CG	471	474	23	130	200	210
FC-LED-480Z	477	478	29	85	112	120
FC-LED-500CG	498	500	27	75	100	100
FC-LED-500Z	500	501	34	80	110	90
FC-LED-515Z	515	519	38	33	65	65
FC-LED-520CG	520	525	34	65	100	100
FC-LED-530TR	530	530	39	60	80	100
FC-LED-540HR	530	543	91	200	320	270
FC-LED-550CG	548	555	90	95	140	160
FC-LED-550Z	546	565	88	100	130	140
FC-LED-585CG	584	585	94	115	150	200
FC-LED-590A	590	600	74	28	28	57
FC-LED-595HR	594	599	64	120	180	140
FC-LED-600Z	603	600	18	20	22	25
FC-LED-615L	618	615	17	78	115	130
FC-LED-625HR	628	624	18	90	180	160
FC-LED-645CG	647	656	68	70	93	118
FC-LED-655A	659	654	22	43	48	80

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FC-LED-660L	664	657	30	70	85	130
FC-LED-690M	695	687	25	52	62	65
FC-LED-700M	702	697	24	7.3	7.86	10.4
FC-LED-730L	734	729	40	42	60	68
FC-LED-760M	761	752	30	24	32	36
FC-LED-770M	777	772	31	16.8	16.8	22
FC-LED-780M	783	775	28	38	35	50
FC-LED-805M	805	790	33	25	25.8	34
FC-LED-810V	813	802	35	56	-	-
FC-LED-820L	826	817	30	-	-	-
FC-LED-850M	858	850	46	60.6	-	-
FC-LED-870Z	871	871	48	-	-	-
FC-LED-880M	880	-	41	-	-	-
FC-LED-910M	915	910	40	30	-	-
FC-LED-940M	940	935	40	48	-	-
FC-LED-1000R	998	1000	68	40	-	-
FC-LED-W30M	-	-	3000	35	40	50
FC-LED-W40L	-	-	4000	110	140	180
FC-LED-W50TR	-	-	5000	160	200	190
FC-LED-W60HR	-	-	6000	225	340	260
FC-LED-W65M	-	-	6500	55	62	100

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Electrical Specifications

Typical Optical RMS Noise (DC-1MHz)	%	<0.05
TTL and Analog inputs		Optically isolated BNC connectors
Digital modulation frequency (TTL)	Hz	DC-50000
Rise / Fall time (10% - 90%)	µs	<2
Analog input voltage range	V	0-5
Analog modulation frequency	Hz	DC-100
Input Voltage	V	12

General Specifications:

Operation temperature range	°C	10-35
Storage temperature range	°C	-10-55
Operative relative humidity (Non condensing)	%	<90
FC2-LED Dimensions (W x H x D) without extrusions	mm	174 x 130 x 197
FC3-LED Dimensions (W x H x D) without extrusions	mm	174 x 130 x 197
FC5-LED Dimensions (W x H x D) without extrusions	mm	241 x 130 x 197
Power Adaptor Dimensions (L x W x H)	mm	175 x 72 x 35
Power Adaptor Weight	g	190