

LED Light Modules

4. Power Solutions

Driver Module Solutions						
Manufacturer	Region	Description	Power (W)	V _{in} (Vac)	Dimming*	Part Number
Philips Lighting	North America	Xitanium LED Driver	25	120 - 277	0-10V/TE**	X1025C100V036XPL1M
		Xitanium LED Driver	25	120	0-10V/TE	XR025C100V036XPM1M
		Xitanium LED Driver	25	120	DALI	XR025C100V036LPM1M
		Xitanium LED Driver	25	277	0-10V/TE	XV025C100V036DPM1M
		Xitanium LED Driver	39	120 - 277	0-10V/TE	913701213402
		Xitanium LED Driver	50	120 - 277	0-10V/TE**	X1050C100V054XPL1M
		Xitanium LED Driver	50	120	0-10V/TE	XR050C100V054XPM1M
		Xitanium LED Driver	50	277	0-10V	XV050C100V054DPM1M
		Xitanium 25W LED Driver	25	220 - 240	-	929000600203
		Xitanium 25W LED Driver	25	220 - 240	TD	929000600403
Philips Lighting	Europe, Middle-East, Africa, Asia	Xitanium 25W/s LED Driver	25	220 - 240	TD	929000485803
		Xitanium 45W LED Driver	45	220 - 240	-	929000614503
		Xitanium 50W/s LED Driver	50	220 - 240	-	929000636403
		Xitanium 50W SH LED Driver	50	220 - 240	-	929000617403
		Xitanium 50W SH LED Driver	50	220 - 240	TD/TE	929000617203
		Xitanium 50W LH LED Driver	50	220 - 240	TD/TE	929000617103
		Fortimo LED Driver	56	220 - 240	-	929000614403
		Fortimo LED Driver	56	220 - 240	TD	929000465003
		Fortimo LED Driver	56	220 - 240	TD	929000465203

* TD = Touch and Dali, TE = Trailing Edge
**120Vac only

5. Thermal Management Solutions

Manufacturer	Region	Description	Heatsink	SynJet Cooler	Wire Harness
Nuventix Inc.	Worldwide	Fortimo LED DLM 1100/1300 - Tamb 40°C	HSSLS-CALBL-003	-	-
		Fortimo LED DLM 2000 - Tamb 40°C	HSSLS-CALBL-005	SSSLs-CM012-017	WALLS-C4600-001
		Fortimo LED DLM 2800/3000 - Tamb 40°C	HSSLS-CALBL-003	SSSLs-CM012-017	WALLS-C4600-001
		Fortimo LED Twistable DLM 1100 - Tamb 40°C	HSSLS-CALCL-012	-	-

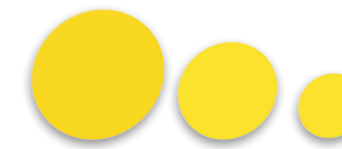
* Requires an external 12VDC power supply. Possible solution would be the Philips Xitanium LEDUNIA0350C12F
** Requires an external 12VDC power supply. Possible solution would be Philips Xitanium 913710815902

6. Connector Solutions

Manufacturer	Region	Length (mm)	Description	Part Number
Philips Lighting	North America	500	Fortimo DLM 7-Wire Cable with Fan Wire	929000690703*
		840	Fortimo DLM 7-Wire Cable with Fan Wire	929000690603*
		500	Fortimo DLM 9-Wire Cable with Fan Wire	929000663703*
		840	Fortimo DLM 9-Wire Cable with Fan Wire	929000683803*
		500	Fortimo DLM 6-Wire Cable with Fan Wire	929000683903*
	Europe, Middle-East, Africa, Asia	840	Fortimo DLM 6-Wire Cable with Fan Wire	929000684003*
		250	Fortimo LED DLM Cable (fixed output/dimmable)	929000463103
		600	Fortimo LED DLM Cable (with protective earth connection)	929000478903
		600	Fortimo LED DLM Cable (with protective earth cable) 12V	929000615203*
		600	Fortimo LED DLM Cable (without protective earth cable)	929000484803

* Includes wire for Nuventix SynJet Cooler and other options

Remote Phosphor



1. LUXEON Royal Blue LEDs

Manufacturer	Product Family	Wavelength Range (nm)	Test Forward Current (mA)	Radiant Efficacy (%)	Part Number
Philips Lumileds	LUXEON Rebel Direct Color	440 - 460	700	37	LXML-PR01-0425
		440 - 460	700	40	LXML-PR01-0500
	LUXEON Rebel ES	440 - 460	700	42-53	LXML-PR02

Note: DC Forward Current: 1000mA; LED Junction Temperature: 150°C

2. Remote Phosphor Light Engines

Manufacturer	Dimensions (mm)	LEDs	Flux Output @ 350mA (mW)	Flux Output @ 700mA (mW)	Wavelength Range (nm)	Connection	Part Number
General Luminaire	70 x 70	6	3095	5675	440 - 460	20cm Leads	GLV91S70701/20-LG0600NA

3. Remote Phosphor Technology

Manufacturer	Series	Shape	Typical lumen output (lm)	Diameter (mm)	Diameter (in)	CCT(K)	CRI	lm/Wrad*	Part Number
ChromaLit	Round		440-800	45	1.8	3000	80	200	CL-830-SR-PC
			440-800	45	1.8	4000	80	210	CL-840-SR-PC
			730-1300	61.5	2.4	2700	90	160	CL-927-LR-PC
			730-1300	61.5	2.4	3000	80	200	CL-830-LR-PC
			730-1300	61.5	2.4	3000	90	165	CL-930-LR-PC
			730-1300	61.5	2.4	3500	80	205	CL-835-LR-PC
			730-1300	61.5	2.4	4000	80	210	CL-840-LR-PC
			1100-2000	75	3	3000	80	200	CL-830-R75-PC
			1100-2000	75	3	4000	80	210	CL-840-R75-PC
			2200-4000	100.0	3.9	3000	80	200	CL-830-R100-PC
2200-4000	100.0	3.9	4000	80	210	CL-840-R100-PC			
Intematix			1500	45	1.8	2700	80	180	CL-827-R45-XT
			1500	45	1.8	2700	90	160	CL-927-R45-XT
			1500	45	1.8	3000	80	200	CL-830-R45-XT
			1500	45	1.8	3000	90	165	CL-930-R45-XT
			1500	45	1.8	3500	80	205	CL-835-R45-XT
			1500	45	1.8	4000	80	210	CL-840-R45-XT
			3000	61.5	2.4	2700	80	180	CL-827-R62-XT
			3000	61.5	2.4	2700	90	160	CL-927-R62-XT
			3000	61.5	2.4	3000	80	200	CL-830-R62-XT
			3000	61.5	2.4	3000	90	165	CL-930-R62-XT
ChromaLit XT	Round		3000	61.5	2.4	3500	80	205	CL-835-R62-XT
			3000	61.5	2.4	4000	80	210	CL-840-R62-XT

*Typical at 25°C



LED Application Feature:

Recessed Downlights

Key Market Drivers

Efficiency

- > 80 lm/W
- Significant energy savings

Payback Period

- 2-3 year payback period

Quality of Light

- Color rendering (>80 CRI)
- Color in application (LUXEON LEDs are tested and measured at 85°C)

- Color consistency of LUXEON A LEDs will stay within a 3 SDCM ellipse; LUXEON Rebel ES are ANSI binned

- Color over angle performance is best in class
- Industry leading reliability and color consistency over time

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LEDs & System Components



1. High Power LUXEON® LEDs

Manufacturer	Product Family	Nominal CCT (K)	Minimum CRI	Typical CRI	Min Flux (lumens)	Typ Flux (lumens)	Test Forward Current (mA)	Typical Efficacy (lm/W)	Part Number
Philips Lumileds	LUXEON Rebel Illumination Portfolio	ANSI 2700	80	85	70	80	350	76	LXM8-PW27
		ANSI 3000	80	85	75	85	350	81	LXM8-PW30
		ANSI 3500	80	85	160	185	700	88	LXW8-PW35
		ANSI 4000	80	85	170	190	700	90	LXW8-PW40
Philips Lumileds	LUXEON Rebel ES	ANSI 5000	80	85	180	200	700	95	LXW8-PW50
		ANSI 2700	90	95	120	135	700	64	LXW9-PW27
		ANSI 3000	90	95	120	145	700	69	LXW9-PW30
Philips Lumileds	LUXEON A	2700	80	85	140	160	700	79	LXH8-PW27*
		3000	80	85	150	165	700	82	LXH8-PW30*

* Freedom From Binning, hot tested & color binned at TJ 85°C

2. Optical Solutions

Manufacturer	Description	Beam Angle (°)	Diameter (mm)	Part Number
Carclo-Optics	10mm Frosted Medium Beam TIR Optic	21	10	10413
Khatod Optoelectronic	90mm 9-LED Fresnel Lens	10, 30, 60	90	PL1172*

* Suited for 6" recessed downlight only

3. Power Solutions

Driver Module Solutions

Manufacturer	Region	Power (W)	V _{IN} (Vac)	V _{OUT} (Vdc)	I _{OUT} (mA)	Part Number
Mean Well	Worldwide	16.8	90-264	9-48	350	LPC-20-350
	North America	12	120	2.4-33	350	LED120A0350C33F
Philips Lighting	Europe, Middle-East, Africa, Asia	12	207-264	2.4-33	350	913700615882
	North America	7.4	90-135	12-21	350	RLDD015L-350H
ROAL Electronics	Europe, Middle-East, Africa, Asia	7.4	176-265	12-21	350	RLDD015H-350H

IC Solutions

Manufacturer	V _{IN} (Vac)	V _{OUT} typ (Vdc)	I _{OUT} typ (mA)	Triac Dimmable	Part Number
Fairchild	85-264	30	External FET		FL7732
	85-264	30	External FET	✓	FL7730
Marvell	85-277	100	1200		88EM8082
	85-264	42	External FET	✓	LV5026
On Semi	85-264	42	External FET		LV5027
	85-264	42	External FET	✓	LV5028

4. Connector Solutions

TE Connectivity inverted thru board connector system

Description	Part Number
Inverted thru board connectors	2106091-1
Inverted thru board mini CT plug assembly	2058943-1

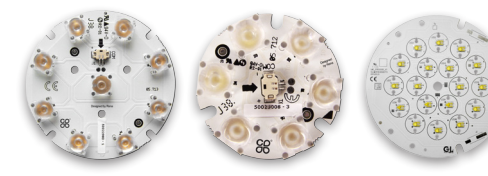
TE Connectivity sealed connector system

Description	Part Number
Wire-to-board right angle header	2106056
Wire-to-board vertical header	2106053
Wire-to-wire receptacle contact	2106123
Wire-to-wire tab contact	2106124
Plug assembly	2106135

AVX 9159 connector system

Description	Part Number
Wired plug with latch	119159002101116
Standard socket	209159002101116
Standard plug	109159002101116
Top loading socket	229159002101116
Shorting socket	589159002000006

LED Light Engines



1. Light Engine Solutions

Manufacturer	Diameter (mm)	LEDs	Lumen Output @ 350mA (lm)	Lumen Output @ 700mA (lm)	CCT (K)	CRI	Connection	Part Number
General Luminaire	50	7	740	1315	4100	>60	TE Poke-In	GLV92C50501/CN-LG07D40T
	50	7	625	1110	3000	>80	TE Poke-In	GLV92C50501/CN-LA07S30Q
	63	9	945	1695	4100	>60	TE Poke-In	GLV92C63631/CN-LG09D40T
	63	9	805	1425	3000	>80	TE Poke-In	GLV92C63631/CN-LA09S30Q
	76	12	1265	2355	4100	>60	TE Poke-In	GLV92C76761/CN-LG12D40T
	76	12	1000	1735	3000	>80	TE Poke-In	GLV92C76761/CN-LB12S30L
RENA	45	6	635	1130	4100	>60	TE Mini-CT	05712R777760200CXXX
	45	6	400	800	3500	>80	TE Mini-CT	05712R888880067CXXX
	45	6	485	840	3000	>80	TE Mini-CT	05712R888880075CXXX
	75	9	895	1695	4100	>60	TE Mini-CT	05713R7777760200CXXX
	75	9	840	1395	3500	>80	TE Mini-CT	05713R888880160CXXX
	75	9	800	1430	3000	>80	TE Mini-CT	05713R888880150CXXX

2. Optical Solutions

Manufacturer	Description	Beam Angle (°)	Diameter (mm)	Optical Holder	Part Number
Carclo-Optics	Narrow (RENA compatible)	18	10	N/A	10412
	Medium Frosted (RENA compatible)	21	10	N/A	10413
	Wide Frosted (RENA compatible)	43	10	N/A	10414
General Luminaire	Narrow	27	13.5	Included	GLVA1BN01H
	Flood	43	13.5	Included	GLVA1BF01H
	Wide	55	13.5	Included	GLVA1BW01H
	50mm Diameter 7-LED Narrow	27	50	GLVA10000X50	GLVA1BN07Y50
	50mm Diameter 7-LED Flood	43	50	GLVA10000X50	GLVA1BF07Y50
	50mm Diameter 7-LED Wide	55	50	GLVA10000X50	GLVA1BW07Y50

3. Power Solutions

Driver Module Solutions

Manufacturer	Region	Number of LEDs per light engine	Power (W)	V _{IN} (Vac)	V _{OUT} MAX (Vdc)	I _{OUT} (mA)	Dimming	Part Number
Philips Lighting	North America	7, 9	12	120	33	350	-	LED120A0350C33F*
	Europe, Middle-East, Africa, Asia	7, 9	12	230	33	350	-	913700615882
	North America	6, 7	20	120	28	700	0-10V	LED120A0700C28DO
Inventronics	Worldwide	6, 7, 9, 12	25	90-305	36	700	0-10V	EUC-025S070DS
		6, 7, 9, 12	16.8	90-264	48	350	-	LPC-20-350
Mean Well	Worldwide	6, 7, 9, 12	33.6	90-264	48	700	-	LPC-35-700
		6	7.4	90-135	21	350	TRIAC	RLDD015L-350H
Roal	North America	12	16.8	90-135	24	350	TRIAC	RLDD015L-350

* Requires TE Connectivity CT-connector

4. Thermal Solutions

Manufacturer	Shape	Dimensions (mm)	Thermal Resistance (°C/W)	Compatible Light Engine	Part Number
General Luminaire	Round	50 x 50	4.4	GL 50mm Circular 7- LED	GLVA2C50501A50
		50 x 80	3.3	GL 50mm Circular 7- LED	GLVA2C50501A80

5. Connector Solutions

Manufacturer	Description	Length (mm)	Part Number
TE Connectivity	Mini-CT-to-leads	150mm	1969341-2
	Mini-CT-to-leads	300mm	1969341-3
	Mini-CT-to-CT	150mm	1969328-5

LED Light Modules



1. LED Light Modules

Manufacturer	Region	Description	Initial Lumens (lm)	CRI	CCT (K)	System Input Power (W)	System Efficacy (lm/W)	Input Voltage (V)	B50 L70 Tc Max 65°C	Part Number
Philips Lighting	North America	Fortimo LED DLM 1100 14W/827UL	1100	>80	2700	14	57	120-277	50k	929000671003
		Fortimo LED DLM 1100 14W/830UL	1100	>80	3000	14	60	120-277	50k	929000671103
		Fortimo LED DLM 1100 13W/835UL	1100	>80	3500	13	62	120-277	50k	929000671203
		Fortimo LED DLM 1100 13W/840UL	1100	>80	4000	13	65	120-277	50k	929000671303
		Fortimo LED DLM 1300 16W/827UL	1300	>80	2700	16	59	120-277	50k	929000671403
		Fortimo LED DLM 1300 16W/830UL	1300	>80	3000	16	61	120-277	50k	929000671503
		Fortimo LED DLM 1300 15W/835UL	1300	>80	3500	15	64	120-277	50k	929000671603
		Fortimo LED DLM 1300 15W/840UL	1300	>80	4000	15	66	120-277	50k	929000671703
		Fortimo LED DLM 2000 26W/827UL	2000	>80	2700	26	60	120-277	50k	929000671803
		Fortimo LED DLM 2000 26W/830UL	2000	>80	3000	26	61	120-277	50k	929000671903
		Fortimo LED DLM 2000 25W/835UL	2000	>80	3500	25	64	120-277	50k	929000672003
		Fortimo LED DLM 2000 24W/840UL	2000	>80	4000	24	67	120-277	50k	929000672103
		Fortimo LED DLM 2800 42W/827UL	2800	>80	2700	42	60	120-277	50k	929000672203
		Fortimo LED DLM 2800 42W/830UL	2800	>80	3000	42	60	120-277	50k	929000672303
		Fortimo LED DLM 2800 39W/835UL	2800	>80	3500	39	64	120-277	50k	929000672403
		Fortimo LED DLM 2800 39W/840UL	2800	>80	4000	39	66	120-277	50k	929000672503
		Fortimo LED TDLM 1100 21W/827 120V	1100	>80	2700	21	51	120	25k	929000613703
		Fortimo LED TDLM 1100 21W/830 120V	1100	>80	3000	21	55	120	25k	929000613603
Fortimo LED TDLM 1100 21W/835 120V	1100	>80	3500	21	59	120	25k	929000613803		
Fortimo LED TDLM 1100 21W/840 120V	1100	>80	4000	21	60	120	25k	929000613503		
Philips Lighting	Europe, Middle-East, Africa, Asia	Fortimo LED DLM 1100 13W/830	1100	>80	3000	14.7	77	220-240	50k	929000660403
		Fortimo LED DLM 1100 12W/835	1100	>80	3500	13.6	81	220-240	50k	929000660503
		Fortimo LED DLM 1100 11W/840	1100	>80	4000	13.1	84	220-240	50k	929000660603
		Fortimo LED DLM 2000 24W/830	2000	>80	3000	28.2	72.0	220-240	50k	929000660803
		Fortimo LED DLM 2000 22W/835	2000	>80	3500	27.2	75.0	220-240	50k	929000660903
		Fortimo LED DLM 2000 21W/840	2000	>80	4000	26.3	78.0	220-240	50k	929000661003
		Fortimo LED DLM 3000 44W/830	3000	>80	3000	50	62.0	220-240	50k	929000618903
		Fortimo LED DLM 3000 44W/835	3000	>80	3500	49	64.0	220-240	50k	929000619003
		Fortimo LED DLM 3000 44W/840	3000	>80	4000	46	68.0	220-240	50k	929000660303
		Fortimo LED TDLM 1100 20W/827 230V	1040	>80	2700	20	52	230	25k	929000498903
		Fortimo LED TDLM 1100 20W/830 230V	1100	>80	3000	20	55	230	25k	929000499003
		Fortimo LED TDLM 1100 18W/840 230V	1100	>80	4000	18	62	230	25k	929000499103
Fortimo LED TDLM 2000 32W/830 230V	2000	>80	3000	32	63	230	25k	929000638003		
Fortimo LED TDLM 2000 32W/840 230V	2200	>80	4000	32	69	230	25k	929000638103		

2. Lamp Holders (For Fortimo LED TDLM Only)

Manufacturer	Region	Description	Input Voltage	Part Number
Philips Lighting	North America	BJB Fortimo LED Twistable DLM 1100lm Lamp Holder	100-120VAC	929000614303
	Europe, Middle-East, Africa, Asia	BJB Fortimo LED Twistable DLM 1100lm Lamp Holder	230VAC	929000499503

3. Optical Solution – Reflectors

Manufacturer	Description	Aluminum Square		Aluminum Round	
		Specular 2x35°	Diffuse 2x32°	Specular 2x35°	Specular 2x20°
Alux-Luxar	Fortimo LED DLM	FLC 100	FLC 200	FLC 600	FLC 700
	Fortimo LED Twistable DLM 1100	FLC 101	-	FLC 601	FLC 701