

# LED Modules

## Technical Specifications

Aug 2012

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MODEL NUMBER:	TM02LN40xx-001	TM02LN40xx-002	TM03LN40xx-001	TM04LN40xx-001	TM04LN40xx-002	TM03LN05xx-F01	TM03LN05xx-E01	TM03LN05xx-G01	TM03LN05xx-H01
COMPATIBLE DRIVER TYPE	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current
COMPATIBLE FULHAM POWER SUPPLIES:[1]	TC12300350-12L TC11200350-15C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC12300700-12L TC11200700-18C TCD11200700-9C TCD11200650-18C T1M4UNV0700-100x T1A4UNV0700-100x T2A4UNV0700-100x T4A4UNV0700-100x	TC11200350-12L TC11200350-15C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC11200350-15C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC11200700-18C TCD11200650-18C T1M4UNV0700-100x T1A4UNV0700-100x T2A4UNV0700-100x T4A4UNV0700-100x	TC12300350-12L TC11200350-15C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC11200350-6C TC12300350-12L TC11200350-15C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC11200350-6C TC12300350-12L TC11200350-15C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC12300350-6L TC11200350-6C TC12300350-12L TC11200350-15C TCD11200350-11C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x
COMPATIBLE FULHAM EMERGENCY PRODUCTS [2]	HotSpot2 (FHS2-UNV-36L) at 350mA only	None	HotSpot2 (FHS2-UNV-36L) at 350mA only	None	HotSpot2 (FHS2-UNV-36L)	HotSpot2 (FHS2-UNV-36L) at 350mA only	HotSpot2 (FHS2-UNV-36L) at 350mA only	HotSpot2 (FHS2-UNV-36L) at 350mA only	HotSpot2 (FHS2-UNV-36L) at 350mA only
AVAILABLE CCTs [2]	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K	2700K, 3000K, 3500K, 4000K, 5000K, 6500K
PCB SIZE (mm)	39x24 (1.54" x 0.94")	140x24 (5.51" x 0.94")	140x24 (5.51" x 0.94")	140x24 (5.51" x 0.94")	140x24 (5.51" x 0.94")	39x15 (1.54" x 0.59")	39x15 (1.54" x 0.59")	39x15 (1.54" x 0.59")	39x15 (1.54" x 0.59")
NUMBER OF MODULES IN ASSEMBLY						10	6	6	4
CENTER ON CENTER (mm)						95	105	75	120
RECOMMENDED ATTACHMENT METHOD	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw
WEIGHT (g)	8	20	20	20	20	60	35	35	25
MAXIMUM INPUT VOLTAGE (VDC)									
MAXIMUM INPUT CURRENT (mA)	350	700	350	350	700	350	350	350	350
NOMINAL DC POWER CONSUMPTION (W)	7.0	7.0	10.5	14.0	14.0	11.0	6.6	6.6	4.4
ELECTRICAL CONNECTION	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG
MAXIMUM STORAGE TEMPERATURE(degC)	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100
MAXIMUM OPERATING AMBIENT TEMPERATURE (degC)	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 85	-40 to 85	-40 to 85	-40 to 85
MAXIMUM SOLDER PAD TEMPERATURE (degC)	105	105	105	105	105	85	85	85	85
THERMAL PAD RECOMMENDED	YES	YES	YES	YES	YES	NO	NO	NO	NO
OPTICAL PERFORMANCE (Lumens)									
2700K (@ rated input)	450	450	675	900	900	825	500	500	325
4000K (@ rated input)	550	550	825	1100	1100	1000	600	600	400
BEAM ANGLE (deg)	120	120	120	120	120	120	120	120	120
CRI (Typ)	80	80	80	80	80	80	80	80	80
CERTIFICATIONS	UR	UR	UR	UR	UR	cURus	cURus	cURus	cURus
UL PART NUMBER [4]	PTL111X2101	PTL111X2101	PTL111X2101	PTL111X2101	PTL111X2101	PTL102X2105	PTL102X2105	PTL102X2105	PTL102X2105
ENERGY STAR for LUMINAIRES (V1.1)	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC
DLC COMPLIANT (V1.6)	Categories 11-16 for Ts ≤ 85degC	Categories 11-16 for Ts ≤ 85degC	Categories 11-16 for Ts ≤ 85degC	Categories 11-16 for Ts ≤ 85degC	Categories 11-16 for Ts ≤ 85degC	All Categories for Ts ≤ 85degC	All Categories for Ts ≤ 85degC	All Categories for Ts ≤ 85degC	All Categories for Ts ≤ 85degC
WARRANTY	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years

[1] Subject to rated loading conditions  
 [2] Selection of appropriate Fulham battery pack depends on number of modules connected to the HotSpot2 product  
 [3] Binning per ANSI C78.377-2008  
 [4] UL file E351548



# LED Modules

## Technical Specifications



MODEL NUMBER:	TM18LN05xx-G01	TM24LN05xx-A01	TM06LN13xx-001	TM18LN05xx-003	TM16SQ12xx-001	TM25SQ05xx-001	TM06SQ26xx-001	TM05SQ40xx-001	TM06SQ40xx-001
COMPATIBLE DRIVER TYPE	Constant Voltage	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current	Constant Current
	T1UNV012V-60L T4N4UNV012V-100x	TC31200500-75LA T1M4UNV0500-100x T1A4UNV0500-100x T2A4UNV0500-100x T4A4UNV0500-100x	TC12300350-12L TC11200350-15C TCD11200350-11C T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	TC12300700-12L TC11200700-18C TCD11200700-9C TCD11200650-18C T1M4UNV0700-100x T1A4UNV0700-100x T2A4UNV0700-100x T4A4UNV0700-100x	TC11200700-18C TCD11200650-18C T1M4UNV0700-100x T1A4UNV0700-100x T2A4UNV0700-100x T4A4UNV0700-100x	TC31200500-75LA T1M4UNV0500-100x T1A4UNV0500-100x T2A4UNV0500-100x T4A4UNV0500-100x	TC11200700-18C TCD11200650-18C T1M4UNV0700-100x T1A4UNV0700-100x T2A4UNV0700-100x T4A4UNV0700-100x	T1M4UNV0350-100x T1A4UNV0350-100x T2A4UNV0350-100x T4A4UNV0350-100x	T1M4UNV0700-100x T1A4UNV0700-100x T2A4UNV0700-100x T4A4UNV0700-100x
COMPATIBLE FULHAM POWER SUPPLIES: [1]									
COMPATIBLE FULHAM EMERGENCY PRODUCTS [2]	None	HotSpot2 (FHS2-UNV-36L) at 350mA only	HotSpot2 (FHS2-UNV-36L) at 350mA only	None	HotSpot2 (FHS2-UNV-36L)	HotSpot2 (FHS2-UNV-36L) at 350mA only	HotSpot2 (FHS2-UNV-36L)	None	HotSpot2 (FHS2-UNV-36L)
AVAILABLE CCTs [3]	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K	2700K, 3000K, 3500K 4000K, 5000K, 6500K
PCB SIZE (mm)	295x16 (11.61" x 0.63")	460x16 (18.11" x 0.63")	280x20 (11.02" x 0.79")	460x16 (18.11" x 0.63")	210x210 (8.27" x 8.27")	210x210 (8.27" x 8.27")	47x47 (1.85" x 1.85")	47x47 (1.85" x 1.85")	47x47 (1.85" x 1.85")
NUMBER OF MODULES IN ASSEMBLY	4	2							
CENTER ON CENTER (mm)	305	560							
RECOMMENDED ATTACHMENT METHOD	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw	#6 or M3 Pan Head screw
WEIGHT (g)	100	70	30	38	150	170	15	15	15
MAXIMUM INPUT VOLTAGE (VDC)	12								
MAXIMUM INPUT CURRENT (mA)		500	350	700	700	500	700	350	700
NOMINAL DC POWER CONSUMPTION (W)	28.8	20.0	7.0	7.0	18.0	8.0	14.0	17.5	21.0
ELECTRICAL CONNECTION	Wire Leads/22 AWG	Poke-in Connector AWG24-18	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG	Wire Leads/22 AWG
MAXIMUM STORAGE TEMPERATURE(degC)	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100
MAXIMUM OPERATING AMBIENT TEMPERATURE (degC)	-40 to 85	-40 to 85	-40 to 100	-40 to 85	-40 to 100	-40 to 85	-40 to 100	-40 to 100	-40 to 100
MAXIMUM SOLDER PAD TEMPERATURE (degC)	85	85	105	85	105	85	105	105	105
THERMAL PAD RECOMMENDED	NO	NO	NO	NO	NO	NO	YES	YES	YES
OPTICAL PERFORMANCE (Lumens)									
2700K (@ rated input)	1800	1475	500	500	1400	625	825	1150	1350
4000K (@ rated input)	2200	1800	600	600	1650	750	1000	1400	1650
BEAM ANGLE (deg)	120	120	120	120	120	120	120	120	120
CRI (Typ)	80	80	80	80	80	80	80	80	80
CERTIFICATIONS	cURus	cURus	UR	cURus	cURus	cURus	UR	UR	UR
UL PART NUMBER [5]	PTL109X2104	PTL101X2105	PTL109X2102	PTL101X2107	PTL105X2004	PTL106X2004	PTL104X2105	PTL104X2104	PTL104X2105
ENERGY STAR FOR LUMINAIRES (V1.1)	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 85degC	Indoor and Outdoor Fixtures for Ts ≤ 105degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC	Indoor Fixture types for Ts ≤ 105degC; Outdoor Fixtures for Ts ≤ 85degC
DLC COMPLIANT (V1.6)	All Categories for Ts ≤85degC	All Categories for Ts ≤85degC	All Categories for Ts ≤85degC	All Categories for Ts ≤85degC	All Categories for Ts ≤85degC	Categories 11-16 for Ts ≤ 85degC	All Categories for Ts ≤105degC	Categories 11-16 for Ts ≤ 85degC	Categories 11-16 for Ts ≤ 85degC
WARRANTY	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years

[1] Subject to rated loading conditions  
 [2] Selection of appropriate Fulham battery pack depends on number of modules connected to the HotSpot2 product  
 [3] Binning per ANSI C78.377-2008  
 [4] UL file E351548

