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TMU075019HLXXXA

RoHS COMPLIANT

Constant Current LED Linear Module

- High Density, high brightness chip array for use in Class 2 Linear applications
- Constant current for maximum efficacy
- On-board connector for ease of assembly
- Available in standard CCT's
- Dimmable when used with a dimmable driver
- Suitable for use in retrofit rebate programs
- 80 CRI standard and 90 CRI available

General Ratings

Max Lumen Output @ Max Current	2580 lumens at 4000K / 80 CRI*
Nominal Current Input	700 mA (750mA Max.)
Nominal DC Power Consumption	17.2W (18.5W Max.)
Nominal Operating Voltage @ Max Current	24.7 VDC
Beam Angle	120°
CRI	80, 90
Operating Ambient Temperature Range (Ta)	-35 to +40°C
Maximum Module Case Temperature (Tc)	L70 = 90°C (Ts = 95°C) / L90 = 60°C (Ts = 65°C)
Estimated Lumen Maintenance	L70 = >60,000hrs / L90 = >36,000hrs
Color Consistency	Binning per ANSI C78.377-2008; 4 SDCM
Overall Size	18" x 0.94" x 0.24" (including connector)
PCB Material / Module Weight	CEM1 / 30 g
Maximum Screw Installation Torque	25 inch - ounces
Safety/Compliance	cURus (File # E351548)
	Class 2 Lighting System
	RoHS Compliant; CE
Energy Efficiency Label	A+ @Nominal Input Current
Warranty	5 years with suitable Fulham LED Drivers

* At Tc mod = 25ºC

Fulham extends a limited warranty only to the original purchaser or to the first user for a period of 5 years from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com)
Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

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TMU075019HLXXXA

RoHS COMPLIANT

Part Numbering Matrix

T	M	U	075	019	H	L	8	40	A

Type	Control Type	Max. Current	Max. Power	PCB Material	Shape	CRI	CCT	Size/Options
M = Module (CE/UL Class 2)	U = None	075 = 750mA	019 = 19W	H = CEM1 +Connector	L = Linear	**8*** = 80 **9** = 90	**27** = 2700K **30*** = 3000K **35** = 3500K **40*** = 4000K **50** = 5000K	**A*** = 18" x 0.94" **Blank*** = Standard **C†** = Conformal Coating

* Indicates standard module options. All others are built to order.

† Contact Fulham for availability, MOQ and lead time applies.

Electrical Specifications

LED Module Part Number	Number of LED	Input Current	Nom. Forward Voltage	Nom. Rated Power
TMU075019HLxxxA	40	350mA	23.1 VDC	8.1W
		700mA	24.6 VDC	17.2W
		750mA**	24.7 VDC	18.5W

** Indicates maximum rated current. Modules may be operated at a current less than or equal to this value. Reference Current vs. Rel. Lum. Flux Table to calculate estimate lumen output at lesser currents.

***Absolute maximum forward voltage was not used in calculating nominal rated power. Data is provided to assist in selecting proper LED driver.

Input Current	Module Abs. Max. Forward Voltage @Tc = 50°C***
50mA	23.7 VDC
100mA	24.2 VDC
150mA	24.7 VDC
200mA	25.0 VDC
250mA	25.3 VDC
300mA	25.8 VDC
350mA	26.1 VDC
400mA	26.5 VDC
450mA	26.9 VDC
500mA	27.2 VDC
550mA	27.4 VDC
600mA	27.7 VDC
650mA	27.8 VDC
700mA	28.1 VDC
750mA	28.3 VDC

Electrical and Optical Specifications

LED Module Part Number	Color Temperature	Nominal Luminous Flux @ 700mA/90 CRI	Nominal Luminous Flux @ 700mA/80 CRI	Efficacy @ 80CRI
TMU075019HLx30A	3000K	1820 lumens	2260 lumens	131 lm/W
TMU075019HLx40A	4000K	1940 lumens	2430 lumens	141 lm/W

Current vs Relative Luminous Flux Table

Forward Current (mA)	Lumen De-rating Multiplier
350	0.54
700	1.00
750 **	1.06

NOTE:
1) Electrical and optical specifications are based on Tc mod = 25ºC. Reference Amb. Temp. vs Rel. Lum. Flux for other temperatures.
2) Standard lumen output and efficacy is calculated for standard options. Reference CCT vs Rel. Lum. Flux chart for lumen ratio calculation.
3) Specifications are subject to change without notice.

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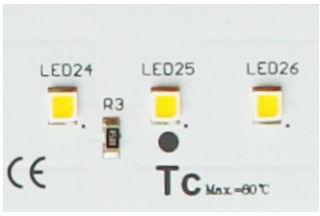
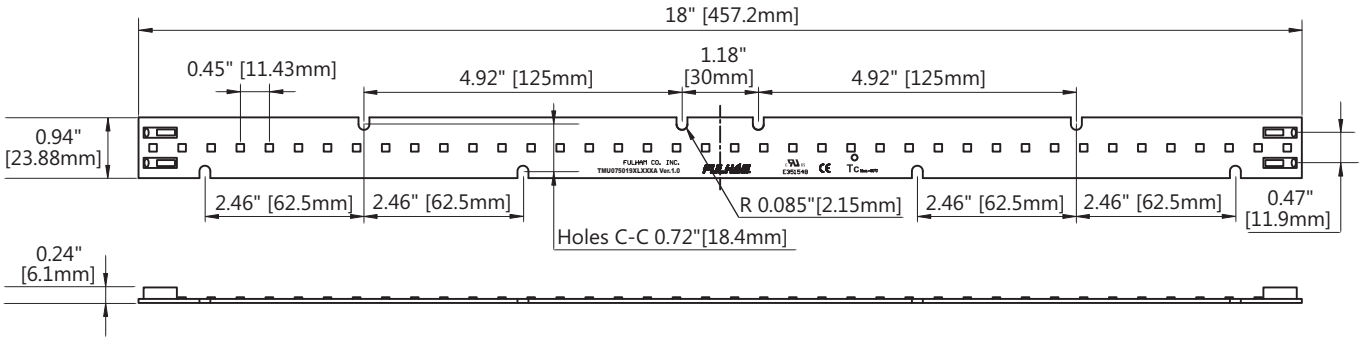
Thermal Specifications

	With Connectors
Storage Temperature Range	-35 to 100°C
Operating Ambient Temperature Range	-35 to 40°C
Maximum Case Temperature (Tc mod)	L70 = 90°C (Ts = 95°C) / L90 = 60°C (Ts = 65°C)



Mechanical Drawings



Accessories

Interconnects

Wago Part Number: Single Pin **2060-951**

- Metal pin(s) to interconnect Modules
- For more detail information, please visit Wago's website: http://www.wago.com/infomaterial/pdf/60291132.pdf

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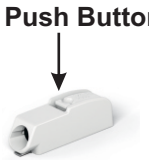
RoHS COMPLIANT

Termination Notes

- If connectors are used, use solid wire size 24 – 18 AWG, rated at a minimum 50V, minimum 105°C, and stripped to length between 6-7 mm (0.24-0.28 inches).
- Push button for insertion of conductor and for easy removal of wires.
- Connector Type: WAGO PN# **2060-451/998-404**



Fastening Notes

- If fastening by screw hole, use any screw with diameter less than 0.185 in (4.7mm). Use all available screw holes to ensure good contact between back side of module and mounting surface. Refer to max specified torque for installation. Suggested screw sizes: #6 or M4 Pan Head screw.
- If fastening using double-sided tape, start with clean, oil-free and dust-free surface. Peel backing and place LED module on mounting surface. Firmly press down on the module to ensure good adherence. Follow the double-side tape manufacturer's installation instructions.
- BJB P2F (Push-to-Fix) fixing elements for PCBs can be used to fasten LED modules to mounting surface. Reference BJB's website for ordering information and specific model to use: http://www.bjb.com/index.php?pid=376706&lid=10.

Environmental Rating

- Modules are rated for dry locations, unless option for conformal coating is requested.
- Conformal coating is RTV based and rated for Environment and Moisture Protection per IPC-CC-830.

Electrostatic Sensitive Product (ESD)

- Fulham LED products should be handled with proper measures to protect against any potential ESD damage.
- When servicing, personnel should be ground and direct contact with LED should be avoided.

Thermal Management

- Proper thermal management should be employed to ensure life and reliability of product.
- Use of thermal grease, paste, pad, or other material interface is highly recommended.

Polarity Notes

- Modules are polarity sensitive.
- Ensure that "positive" from LED Driver is connected to "positive" of LED modules and that "negative" from LED Driver is connected to "negative" of LED modules.
- Polarities of modules are marked with "+" for positive and "-" for negative.

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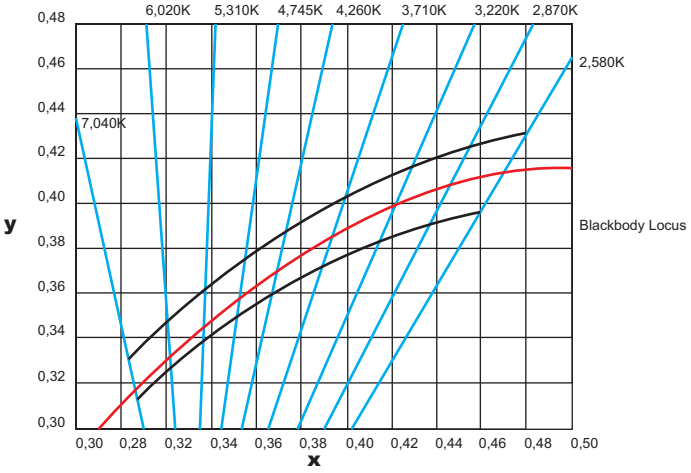
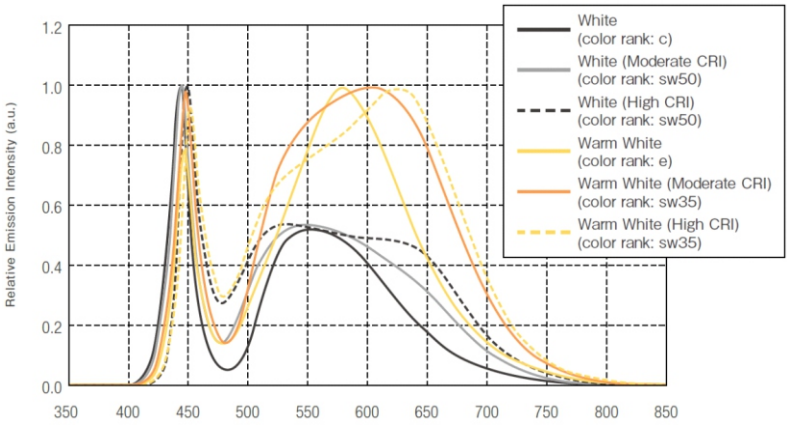
RoHS COMPLIANT

Color and Binning



Ref. Nichia
Chromaticity Diagram for ANSI bins
For reference only. For more detailed info, contact factory.

Optical Spectrum***



*** Value varies depending on product type and color rank
Ref. Nichia
LED Catalogue 2013
For reference only. For more detailed info, contact factory.

Thermal De-Rating

Ambient Temperature (Ta)	Relative Luminous Flux
25ºC	1
30ºC	0.991
35ºC	0.989
40ºC	0.980
45ºC	0.975
50ºC	0.970
55ºC	0.960
60ºC	0.950

Ref. Nichia
LED757 Spec Sheet
For reference only. For more detailed info, contact factory.

CCT vs Luminous Flux

CCT	Relative Luminous Flux
2700K	0.87
3000K	0.93
3500K	0.96
4000K	1.00
5000K	1.07

Ref. Nichia
LED757 Spec Sheet
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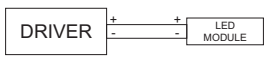
RoHS COMPLIANT

Compatible Fulham LED Drivers

Fulham Part Number	Driver Description	# of Modules/Driver	Wiring Diagram
TC11200700-18C	700 mA, 18W CC Driver, 120V AC Input	1	A
T1T11200700-18C/18CA	700 mA, 18W CC Driver, 120V AC Input, TRIAC Dimmable	1	A
T1T11200650-17CA	650 mA, 17W CC Driver, 120V AC Input, TRIAC Dimmable	1	A
T1M1UNV0700-30L	700 mA, 30W CC Driver, Universal Input, 0-10V Dimmable	1	A
T1T11200700-30L	700 mA, 30W CC Driver, 120V AC Input,TRIAC Dimmable	1	A
T1(M1)UNV0700-28C	700 mA, 28W CC Driver, Universal Input, (0-10V Dimmable)	1	A
T1M13470700-28C/28V	700 mA, 28W CC Driver, 347V Input, 0-10V Dimmable	1	A
T1(M1)UNV0700-40C	700 mA, 40W CC Driver, Universal Input, (0-10V Dimmable)	1, 2	A, B
T1M13470700-40C/40V	700 mA, 40W CC Driver, 347V Input, 0-10V Dimmable	1, 2	A, B
T1(M1)UNV1400-60L	1400 mA, 60W CC Driver, Universal Input, (0-10V Dimmable)	2	C
T1UNV0700-200L	700 mA, 200W CC Driver, Universal Input	7~11	B
T1M1UNV105P-40E	250~1050 mA Programmable, 40W CC Driver, Universal Input, 0-10V Dimmable	1~2 (700mA)	A, B
T1A1UNV105P-40E	250~1050 mA Programmable, 40W CC Driver, Universal Input, DALI Dimmable	1~2 (700mA)	A, B
T1M1UNV105P-60E/60F	250~1050 mA Programmable, 60W CC Driver, Universal Input, 0-10V Dimmable	1~2 (700mA)	A, B
T1A1UNV105P-60E/60F	250~1050 mA Programmable, 60W CC Driver, Universal Input, DALI Dimmable	1~2 (700mA)	A, B
FHS2-UNV-36L	Hotspot2 at 350 - 700mA output		

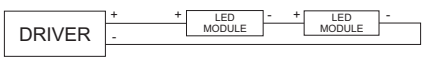
NOTE:
1. Subject to rated loading conditions.
2. Modules are polarity sensitive. Ensure that “positive” from LED Driver is connected to “positive” of LED modules and that “negative” from LED Driver is connected to “negative” of LED modules.
3. List is subject to change without notice.

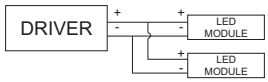
Wiring Diagram



A - Single Channel Driver, 1 LED Module connected

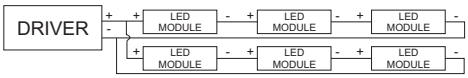
B - Single Channel Driver LED modules connected in series





C - Single Channel Driver, LED Modules connected in parallel

D - Single Channel Driver LED Modules connected in series & parallel



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