

TRH

Project Name:	
Type:	



Impact-Resistant Diffuser



APPLICATION

This recessed, vandal-resistant designed with a high impact acrylic lens, high performance static luminaires provide general illumination for rough service. Its high efficiency, great performance and value make it an ideal choice for commercial and institutional environments.

FEATURES:

- General illumination for vandal-resistant applications. Ideal for areas that require higher levels of protection from physical assault, while providing proper illumination for safety or security.
- 100% acrylic, clear prismatic with minimum 0.14" thickness A12 pattern lens as standard.
- Die formed, cold-rolled, heavy gauge steel housing construction provides durability and strength.
- Steel door frame features overlap mitered corners. Formed from cold-rolled steel and secured by stainless steel tamper-resistant TX-20 screws, three per side for 2x4 fixture housing. Ceiling trims available to fit most recessed applications.
- Five stage iron-phosphate pretreatment ensures superior paint adhesion and rust resistance. Painted parts finished with high-gloss, baked white enamel.
- Optional Fully Gasketed(GS2) is available.
- Paint after fabrication.

MOUNTING:

- Recessed ceiling mount.
- Compatible with most ceiling types.
- Field installed flange kit. (available as option)

LED:

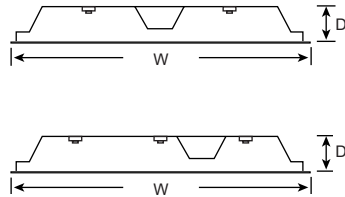
- High quality array LEDs.
- LM80
- Color Temperature: 2700/3000/3500/4000/5000 (K)
- Color Rendering Index: > 80
- Calculated L70: 122,000 hours
- Reported L70: +60,000 hours

ELECTRICAL:

- High power factor electronic driver, operate from a 120 ~ 277 Vac input range, 50 / 60 Hz.
- Features included over voltage protection, surge, short circuit protection and over load protection.
- Power Factor: typical > 0.95, THD <20, meets Class 1 or Class 2 circuit.
- Philips Xitanium: 0-10V Dim to 1%(PH).
- Osram Optotronic: 0-10V Dim to 1%(OS1) or 10%(OS).
- Generic : 0-10V 10% dim. (GR)
- Operating temperature: -4°F (-20°C) ~ 122°F (50°C).
- <ELCU-200>
- Guarantees emergency lighting remains ON or is turned on when power to the control device is lost.
- Interfaces with fire alarm panel or security system.
- "Watchdog" feature allows emergency loads to be controlled in tandem with normal power loads.
- UL listed for use in emergency circuits.

LISTING:

- UL/CUL listed and labeled.
- Listed to UL 1598 and UL 8750.
- Recessed Luminaires, Type IC
- Suitable for damp locations.
- CEC Compliant EM (please contact for more information)
- 5 years limited warranty.
- 7 or 10 years limited warranty. (optional) ¹²
- ARRA compliant (optional).
- BAA compliant (optional).
- Bluetooth Mesh System available, please contact factory for more information.



Specifications: 2'x4'

Length: 48 (1219)
 Width: 24 (609)
 Depth: 4-13/16 (122)
 Weight: 23.77 lbs (10.78 kg)

All dimensions are in inches (millimeters).

CONFIGURATIONS

Series	Size	LED	AC Input	Lumen Output (4000K)	Lumen Efficiency (4000K)
TRH	2' x 4'	36LED	39.58W	4850.41 lm	122.55 lm/W
		44LED	47.08W	5798.86 lm	123.17 lm/W
		54LED	57.79W	7134.53 lm	123.46 lm/W
		72LED	75.50W	9238.20 lm	122.36 lm/W
		108LED	108.0W	13088.52 lm	121.19 lm/W


CCT	Multiplier		
	3000K	3500K	5000K
2X4	0.9809	0.9980	1.0030

LED RECESS TROFFER VANDAL RESISTANT


TRH

ORDERING INFORMATION

EXAMPLE: TRH-24-36LED-35K-UNV

MODEL	SIZE	LED	COLOR TEMP.	EFFICACY	CRI	TRIM TYPE
TRH	24 2' x 4'	27LED 27W LED 36LED 36W LED 44LED 44W LED 54LED 54W LED 72LED 72W LED 108LED 108W LED	-27K 2700K ² -30K 3000K -35K 3500K -40K 4000K (Std.) -50K 5000K	(Blank) HE Standard High Efficacy 	(Blank) C9 80+ CRI 90+ CRI ³	(Blank) FK Grid Flange ⁴

* Contact factory for custom wattage or lumen requirement. ¹

DIFFUSER		DOOR FRAME		VOLTAGE		LED DRIVER ⁶			
(Blank) Pattern #12 Acrylic High Impact Lens 0.140" Thick A19 Pattern #19 Acrylic Lens 0.156" Thick	(Blank) Flush Steel, White SB Flush Steel, Black	UNV 120-277V 120 120V 277 277V 347 347V 480 480V ⁵	GR Generic, 0-10V 10% dim (Std.) DM1 Generic 0-10V 1% dim PH Philips Xitanium, 0-10V 1% dim OS Osram Optotronic, 0-10V 10% dim OS1 Osram Optotronic, 0-10V 1% dim SD40 40% / 100% Bi-Level Step dim (PH only) SDXX XX% / 100% Bi-Level Step dim (Specify XX : 10%~70%) (PH only) TDM Triac Dim. (120V only) TD30/70 30% / 70% / 100% Tri-Level Step dim (PH only) TDXX/YY XX% / YY% / 100% Tri-Level Step dim (Specify XX, YY : 10% ~ 70%) (PH only)	ES566 eldoLED SOLOdrive Natural Dimming to dark, 0-10V, 100% ~ 0.1% dim LDE1 Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology, 100% ~ 1% dim ELV ELV compatible (reverse-phase or trailing-edge), (120V only) PHSR Philips Xitanium Sensor-Ready, Dali 5%~100% dim PHDL Philips Xitanium DALI driver, Dim to 5% ED560 eldoLED LightShape DALI dim to dark, 0.1% ~ 100% LTEA2W Hi-lume 1% 2-wire LED driver (120V forward phase only)					
						 BLT Bluetooth Mesh System (contact factory for more information)			

OPTIONS		LIGHTING CONTROL SYSTEM	
EMG8 1296 LUMEN EM Battery Backup (CEC Compliant EM) ^{7,8} EMG15 2430 LUMEN EM Battery Backup (CEC Compliant EM) ^{7,8} EMG20 3240 LUMEN EM Battery Backup (CEC Compliant EM) ^{7,8} EMG25 4050 LUMEN EM Battery Backup (CEC Compliant EM) ^{7,8} ELCU-200 Fail-to-on Emergency lighting, UL924 ⁹ GTD Bodine Generator Transfer Device GTD10DIM Bodine Generator Transfer Device (0-10VDC Dimmer Override) AB Two Ballast for AB Switch MS11 Master Slave w/ 11' Whip PW6 Pre-wired 6' Whip Flex F1 Single fuse for 120/277/347V ¹⁰ F2 Double fuse for 208/240/480V ¹⁰ AR Aluminum Reflector GS2 Fully Gasketed Door Frame and Fixture Housing 07W Optional 7 Years Limited Warranty ¹¹ 010W Optional 10 Years Limited Warranty ¹¹ ARRA Assembled in USA for Buy American Act BAA BAA(Buy American Act) and BABA(Build America Buy America) compliant	PPA102S <u><Bluetooth></u> Bluetooth Powerpack (Consult factory for installation location)		

NOTES:

- Contact us for the max watt / lumen information.
- Available with C9 (CRI90) only.
- Lumen per watt is around 15% less than standard CRI80+.
- Flange kits are supplied in separate boxes, field installed.
- Supplied with a step down transformer.
- To find an approved dimmer switch, please see table 1.
- Contact us for other options.
- Must specify voltage; not available with 347V/480V.
- Shipped separately.
- Must specify voltage.
- This limited warranty covers electrical parts only and does not apply to labor, equipment lease, or defect from improper installation or operation. EM battery backup is not included.

COMPATIBLE DIMMER SWITCH (TABLE 1)

Model #	Brand	Compatible Dimmer Switch	
(Blank)	-	<Leviton>	IlumaTech IP7 series
		<Lutron>	Visit www.lutron.com/advance for a list of dimmers (Mark VII) that will work with this driver.
		<Philips>	Sunrise : SR1200ZTUNV
ES566	eldoLED SOLOdrive	<Busch-Jaeger>	2112U-101
		<Jung>	240-10
		<Leviton>	IlumaTech - IP710-DLX
		<Lightoller Controls>	ZP600FAM120
		<Merten>	5729
		<Pass & Seymour>	CD4FB-W
		<Wattstopper>	DCLV1
		<Sensor Switch>	nIO EZ
		<Synergy>	ISD BC
		<ABB>	SD/S 2.16.1
		<Lutron>	Nova T: NTFTV Diva - DVTv-xx, NFTV GRAFIK Eye: GRX-TVI w GRX3503 Energy Savr Node: QSN-4T16-S TVM2 Module
<Crestron>	GLX-DIMFLV8, GLXP-DIMFLV8, GLPAC-DIMFLV4-*, GLPAC-DIMFLVV8-*, GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM, DIN-AO8, DIN-4DIMFLV4, CLS-EXP-DIMFLV, CLCI-1DIMFLV2EX		
ED560	eldoLED DUALdrive	<Lunatone>	SS-LUNAT PS2 30mA, SS-LUNAT Touch or BT, SS-LUNAT Comm
LDE1	Lutron Hi-lume 1% EcoSystem	<Lutron>	PowPak Dimming Modules: RMJ-ECO32-DV-B, FCJ/FCJS-ECO ^{1,2} Energi Savr Node (120V only): QSN-1ECO-S, QSN-2ECO-S GRAFIK Eye QS/Homeworks QS control unit (120V only): QSGRJ- _E(wireless) QSGR- _E Quantum Hub (120V only): QP2- _2C/4C/6C/8C Homeworks QS/myRoom Plus power module (120V only): LQSE-2ECO-D
PHSR ³	Philips Xitanium Sensor-Ready	<Ilumra>	<u>Single Rocker Self-Powered Light Switch (on/off, dim-up/down)</u> Ilumra# ZBT-S1AWH Digi-Key# 1082-1033-ND <u>Dual Rocker Self-Powered Light Switch (on/off, dim-up/down, scene1,2)</u> Ilumra# ZBT-S2AWH Digi-Key# 1082-1034-ND
TDM	KEYSTONE	<Lutron>	Diva DV-600P, SkyLark S-600P, Ariadni AY-600P, Ariadni TG-603P, Maestro MA-600 (Digital), Diva CFL/LED DVCL-153P, Satin Colors DVSC-600P-SW
		<Leviton>	6641, IlumaTech IPI06-1LX, ToggleTouch TGI06-1LW (Digital)
ELV	KEYSTONE	<Lutron>	MAELV-600BL (Digital), DVELV-300P, SkyLark SELV-300P
LTEA2W	Lutron Hi-lume 2-wire (120V forward voltage only)	<Lutron>	Visit http://www.lutron.com/TechnicalDocumentLibrary/369543_ENG.pdf for a list of compatible dimmer switches.

NOTES:

1. All devices connected to one FCJ/FCJS-ECO will be controlled together. Devices will dim to the same level as the result of a control command. For more detail on adjusting low-end light level refer to Application Note#556 at www.lutron.com.
2. For the Line/Hot (L/H) terminal on the driver, it is preferred not to use the switched hot (red) wire from the control but rather the hot wire directly from the power source.
3. Recommended for EasySense System.