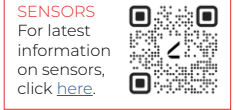


# TOGO

WALL

STATIC WHITE, SOLA, DUO, QUADRO

 Lumenwerx



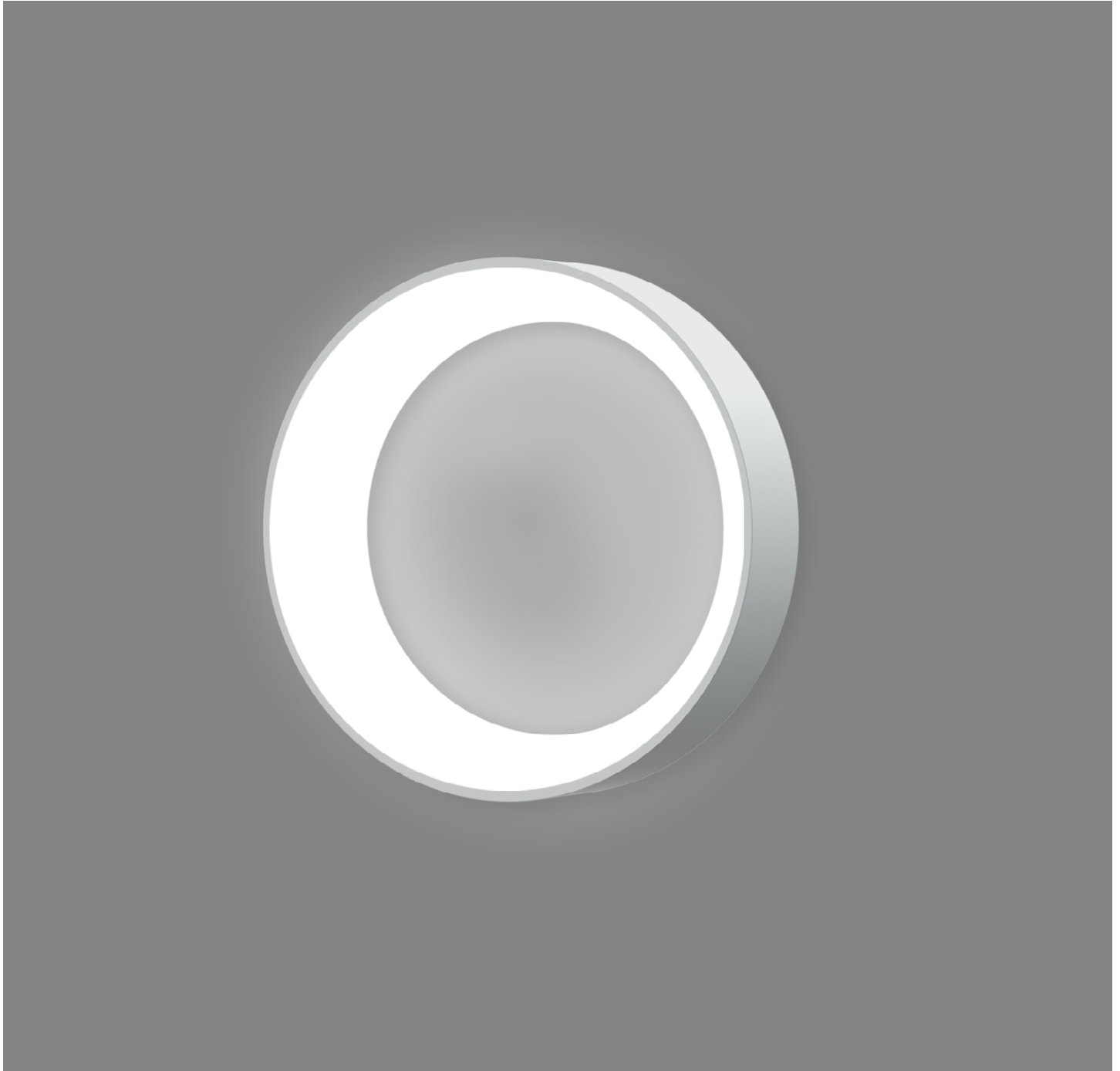
## DESCRIPTION

Togo provides generous ambient illumination from a minimal and elegant ring form. Nestled in a crisp 4" high opaque band, the distinctive, annular diffuser glows inwardly. The diffuser's softly rounded compound curve lends Togo a slender appearance.

Available in Ø 18" and Ø 24". Togo delivers efficient illumination and a range of light outputs.

Togo's outer housing of extruded aluminum is welded and buffed to a seamless band that can be painted in our nine standard finishes, or an RAL custom color, to coordinate with virtually any interior finish.

Togo supports the full range of Chromawerx SOLA, DUO, and QUADRO options for tunable white and RGBW expressive color.



Project: \_\_\_\_\_

Type: \_\_\_\_\_

## Order Guide

LUMINAIRE ID	SIZE	OPTIC	LIGHT SOURCE	CRI	LUMEN PACKAGE				
<b>TOGW</b>		<b>ULO</b>		<b>90CRI</b>					
TOGW - Togo Wall	18IN - Ø 18" 24IN - Ø 24"	ULO - Uniform Lambertian Optic	SW - Static white	90CRI - 90+ CRI	SW, SOLA, DUO			QUADRO	
			SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K		Low	Medium	High		
			QUADRO - RGBW 4-channel control		Ø 18"	1800LM	2500LM	3200LM	41W - 41 W output
					Ø 24"	2500LM	3500LM	4500LM	54W - 54 W output

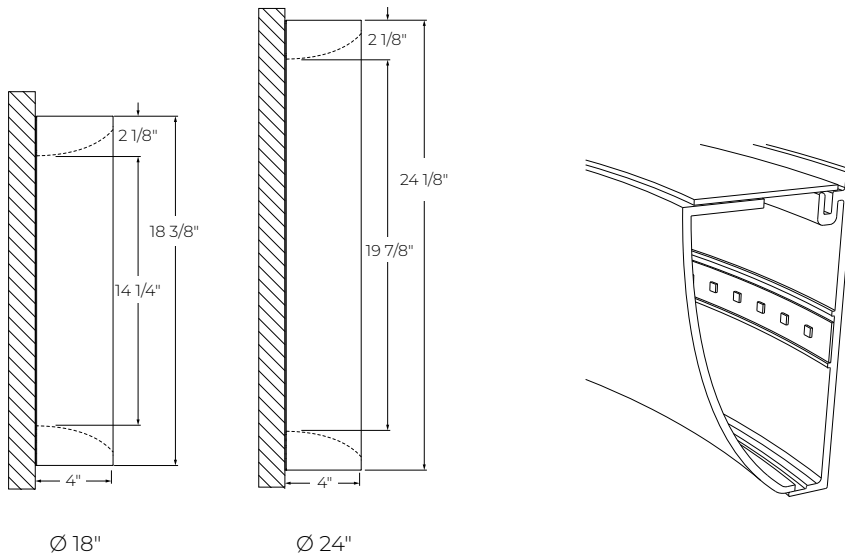
COLOR TEMP. Specify NA for SOLA, DUO	VOLTAGE	DRIVER	ELECTRICAL <sup>4</sup>	MOUNTING	FINISH	
			<b>1C</b>	<b>MBP</b>		
<b>27K</b> - 2700K <b>30K</b> - 3000K <b>35K</b> - 3500K <b>40K</b> - 4000K <b>50K</b> - 5000K <b>NA</b> - Not applicable	<b>120V</b> - 120V <b>277V</b> - 277V <b>UNV</b> - 120V-277V <b>347V</b> <sup>1</sup> - 347V  <sup>1</sup> Available with RD1 driver only.	<b>REMOTE DRIVER</b>  <u>SW</u> <b>RD1</b> - 1% 0-10V <b>RELV</b> <sup>2</sup> - ELV 120V <b>RTRI</b> <sup>2</sup> - TRIAC 120V <b>RDA</b> <sup>3</sup> - DALI <b>RLDE1</b> <sup>3</sup> - Lutron Hi-Lume 1% Eco <b>RELD1</b> - eldoLED 1% ECOdrive 0-10V <b>RELD0</b> - eldoLED 0.1% SOLOdrive 0-10V  <u>SOLA</u> <b>RSD1</b> - single 0-10V input  <sup>2</sup> Available with 120V only. <sup>3</sup> On-site commissioning is required.	<b>DUO</b> <b>RDMX</b> <sup>3</sup> - DMX <b>RDDA</b> <sup>3</sup> - DALI DT6 <b>RDDA8</b> <sup>3</sup> - DALI DT8 <b>RDD1</b> - Dual 0-10V input for CCT/intensity <b>RLD2</b> <sup>3</sup> - Lutron DALI-2 digital  <u>QUADRO</u> <b>RDMX</b> <sup>3</sup> - DMX	<b>1C</b> - 1 circuit  <sup>4</sup> For other circuit configurations, consult factory.	<b>MBP</b> - Mounting back plate	<b>W</b> - Matte white <b>AL</b> - Aluminum <b>B</b> - Matte black <b>RAL1028</b> - Yellow <b>RAL2004</b> - Orange <b>RAL3020</b> - Red <b>RAL4010</b> - Magenta <b>RAL5002</b> - Blue <b>RAL6018</b> - Green <b>CF#</b> - Custom finish, specify RAL#

# TOGO

WALL  
 STATIC WHITE, SOLA, DUO, QUADRO

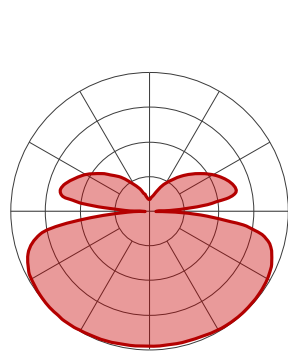


## Dimensions



## Photometrics

Values calculated based on 3500K and 90+ CRI.



Ø 18"

LM	WATTS	LM/W
1800	19	95
2500	27	92
3200	35.5	90

Ø 24"

LM	WATTS	LM/W
2500	26.5	95
3500	38	92
4500	50.5	89

### MULTIPLIER TABLE

Use this table to get results for different color temperatures for all photometric tables.

CCT	WATTS	LPW
2700K	1.07	0.93
3000K	1.04	0.97
3500K	1.00	1.00
4000K	0.98	1.02
5000K	0.92	1.09

## Technical Specifications

### OPTIC

#### Uniform Lambertian Optic (ULO)

Thermoformed from impact-modified white PMMA, the ULO provides even luminosity, with up to 88% transmission. Combined with the LED array running around the inside of the housing, the open form and ULO create a widespread 67% inward and 33% outward light distribution with spacing criteria of 1.6.

### LIGHT SOURCE

#### Static white

Custom array of mid-flux LEDs are mounted directly to the housing for optimal thermal performance. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with 90+ CRI with elevated R9 value. Color consistency is maintained to 3 SDCM. LEDs are operated at a reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and results have shown L80 lumen maintenance are greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

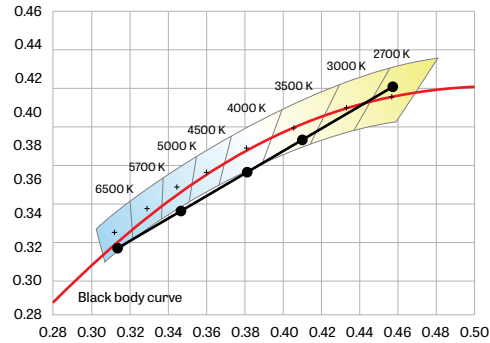
#### Chromawerx SOLA

It is a single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple analog control sends a common signal to dual output digital drivers, which are programmed to adjust a specially populated LED array to emulate the effect of dimming a filament source. Dimming range is programmable but the default option runs from 3500K at 100% of full power to 2200K at 5% of full power. CRI is maintained above 80 throughout the dimming range.

#### Chromawerx DUO

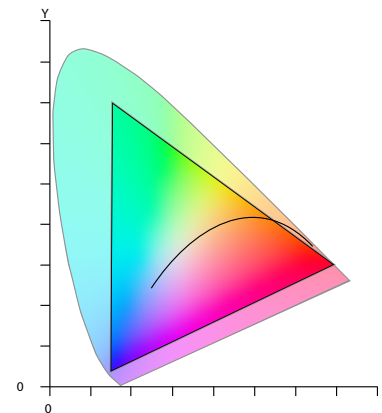
It is a two-channel control. It uses an analog (0-10V) protocol for separate control of luminaire CCT and intensity or a digital (DMX, DALI and LD2) protocol for synchronous control of both warm and cool LED arrays to enable the user to set color temperature and light output. Commonly called "tunable white", Chromawerx two-channel control provides the range of cool (6500K) to warm (2700K) color that can be useful for helping to entrain circadian rhythms, stimulate alertness for improved educational and work productivity, and compensate for jet lag, among other applications. The Chromawerx drivers are programmed to limit maximum light output and power usage across all color temperatures. CRI is maintained above 80. When paired with DALI drivers (DDA/DDA8), color tuning follows a linear dimming curve.

ANSI C78.377-2015



#### Chromawerx QUADRO

Chromawerx QUADRO is a four-channel control that operates an RGBW LED array and addresses the need for more expressive color in architectural applications. The DMX driver supports familiar programming tools for both dynamic multi-hued color and precise white color point control. While a typical user interface will be a DMX controller by others, Lumenwerx also offers a simple control station for stand-alone color changing applications.



### ELECTRICAL

#### Static white

Factory-set, adjustable output current LED driver with universal (120-277 VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency > 84%, PF > 0.9, THD < 20%. Other specifiable options include Lutron Hi-Lume 1% Eco, eldoLED 1% ECOdrive 0-10V, eldoLED 0.1% SOLOdrive 0-10V, ELV, TRIAC, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant. ELV and TRIAC dimming performance (including minimum dimming percentage) subject to dimmer selection.

## WALL

STATIC WHITE, SOLA, DUO, QUADRO

**SOLA**SD1

Factory-set, adjustable output current LED driver with universal (120-277 VAC) input. Using a single 0-10V control signal, the light output warms in color temperature as it dims down to 1% and 2200K. At maximum driver load, efficiency<86%, PF>0.9, THD<20%.

**DUO**DMX

Factory-set adjustable output current electronic driver with 120-277 VAC line input. Using DMX wall controls (optionally supplied by Lumenwerx) or an existing DMX control system, both channels of LEDs are independently adjustable. Each DMX driver can be independently addressed using the built-in RDM (Remote Device Management) in the field. Dimming down to 1% is attainable. Rated life (90% survivorship) of 50,000 hours at 50°C maximum ambient temperature. At maximum driver load, efficiency<84%, PF>0.9, THD<20%.

DALI

Factory-set adjustable output current electronic driver with 120-277 VAC line input. Using an existing DALI control system (supplied by others), one control channel adjusts the fixture color temperature, and the other control channel adjusts fixture brightness. With DALI Type 6, two DALI addresses are required to control both channels. With DALI Type 8, one DALI address is required to control both channels. Dimming down to 1% is attainable. Rated life (90% survivorship) of 50,000 hours at 50°C maximum ambient temperature. At maximum driver load, efficiency<84%, PF>0.9, THD<20%.

DD1

Factory-set adjustable output current LED driver with universal (120-277 VAC) input. Controlled via two individual 0-10V signals, one for setting light output down to a minimum of 1% and the other for adjusting the CCT (default range of 6500K-2700K). Rated life of 50,000 hours at 70°C maximum driver case temperature and 100% load conditions. Typical efficiency of 86%, PF>0.9, THD<20% at 100% load conditions.

LD2

Lutron DALI-2 digital drivers provide a high-performance tunable white solution with single-address digital control. Guaranteed performance and compatibility when used with Lutron DALI-2 controls.

**QUADRO**DMX

Factory-set, adjustable output current, multi-channel LED driver with universal (120-277 VAC) input. Using DMX wall controls (optionally supplied by Lumenwerx) or an existing DMX control system, four channels of LEDs (Red/Green/Blue/White) are independently adjustable. Each DMX driver has multiple output channels that can be independently addressed at the factory or on-site using built-in RDM (Remote Device Management) functionality. Dimming range from 100%-0%. At maximum driver load, efficiency<89%, PF>0.9, THD<20%.

**PoE**

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, DUO (tunable white), QUADRO (RGBW), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

**MOUNTING**

Fixtures may be mounted to the wall using a bracket.

**FINISH**

**Interior:** 95% reflective matte powder coated white paint

**Exterior:** Matte white, matte black, aluminum and a range of vibrant color powder coating. Custom finishes are also available.

**CONSTRUCTION**

**Housing:** Rolled and seamlessly welded aluminum

**Lens:** Acrylic

**WEIGHT**

**Ø 18":** 4.4 lbs - 2 kg

**Ø 24":** 9.3 lbs - 4.2 kg

**CERTIFICATION**

**ETL:** Rated for indoor dry/damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

**WARRANTY**

Lumenwerx provides a five-year limited warranty on electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.