

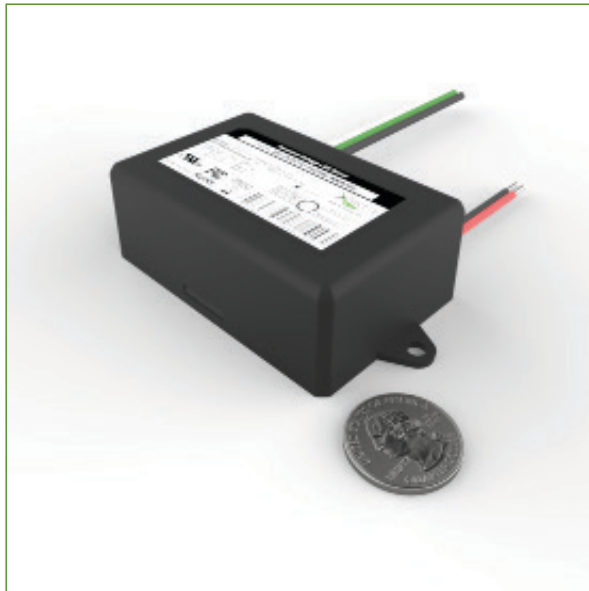
# Compact™ CV Series

## XEL-020C Constant Voltage Power Supply



20W Color Mixing / IoT / Industrial & Sensor / UV / Power

Nominal Input Voltage (Vin)	Family Output Power (W)	Output Voltage (Vout)	MAX Output Current (A)	Max Efficiency (%)	UL Max Case Temp. TC (°C)	THD (%)	Power Factor	Dimming Method	Dimming Range (% of Iout)
120~277Vac	20W MAX	24Vdc	0.80A	84.2%	90°C	< 20%	> 0.9	N/A	N/A



- ✔ **Supports Fast Load Changes**
- ✔ **Ideal for Single Point UV Product**
- ✔ **Supports High Peak Loads with Instantaneous Power Delivery**
- ✔ **Improves System Level EMI with High Load Transient Rejection**
- ✔ **Power Factor & THD Correction**
- ✔ **Stand-alone IoT & Sensor Power Supply**
- ✔ **Universal AC input (108~305Vac)**
- ✔ **Compact Size for Controls & Lighting Systems**
- ✔ Turn on/off in less than 500 milliseconds
- ✔ Built-in Commercial grade Surge Protection
- ✔ Integrated open load, short circuit & temperature protection
- ✔ Turn on & Full power operation between -20°C to +55°C ambient (T<sub>case</sub> rated for 90°C)
- ✔ XenerQi Industry Leading 5 Year Warranty<sup>2</sup>
- ✔ Class A Noise Rating
- ✔ Complies to FCC CFR Title 47 Part 15

See product specific data pages for details.

## Typical Applications



# Dimensions & Installation

(not to scale)

## CASE

Material	Plastic (UL94 V-0)
Unit Weight	TBCg (±10)
Dimensions	89.6mm x 46.5mm x 26mm / 3.5" x 1.8" x 1.02"

## WIRING

Input Wires	18AWG (UL1015) (L:Black, N:White, G:Green)
Output Wires	22AWG (UL1430) (LED+:Red, LED-:Black)
Dim Wires	N/A
Wire Lengths	152.4mm (±3mm) / 6" (±0.12")
Strip Lengths	9.5mm (±0.5mm) / 0.375" (±0.02")

## DIMENSIONS

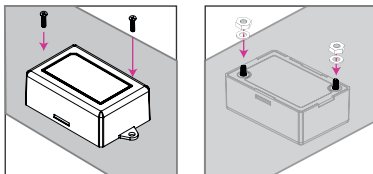
ORDER CODE: XEL-020CTU

Detailed 2D & 3D dimensional drawings available on request.

## MOUNTING & INSTALLATION

Fixings 2x M3\*10mm / 5-40\*3/18" Fastners

### Installation



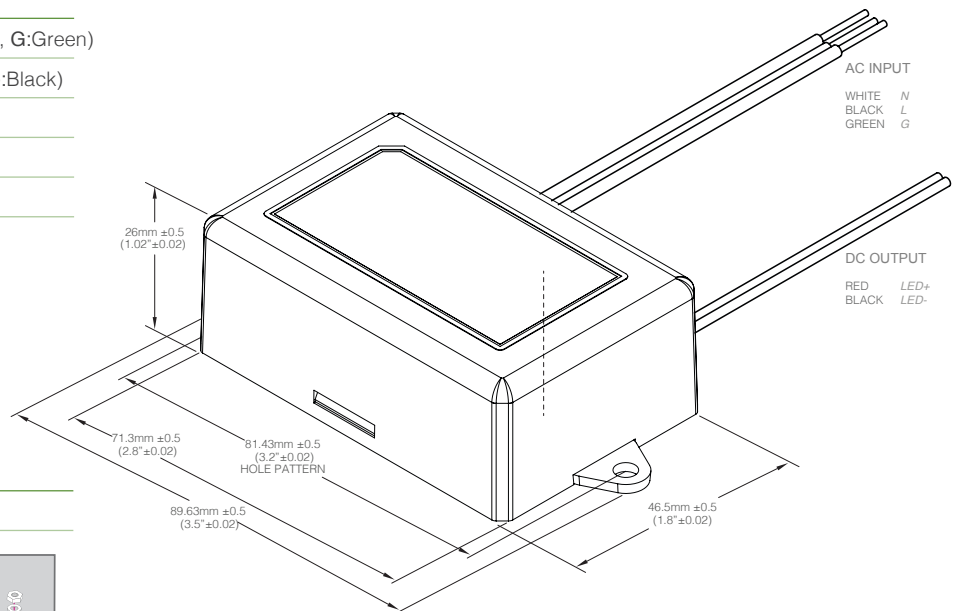
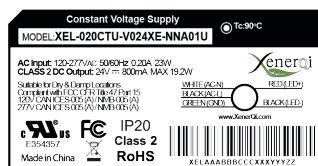
**WARNING: TO REDUCE THE RISK OF FAILURE / INJURY**  
DRIVER CASE MUST BE ELECTRICALLY GROUNDING.  
DRIVER MUST BE INSTALLED IN LUMINAIRE IN ACCORDANCE WITH THE LOCAL CODES.

FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND/ OR DAMAGE TO THE SYSTEM.

(DRIVER INSTALLATION WITHIN LUMINAIRE MUST FORM A FIRE RATED ENCLOSURE - ELECTRICAL CONNECTIONS MUST BE MADE WITHIN A FIRE RATED ENCLOSURE - COMPLIANCE IS THE RESPONSIBILITY OF THE LUMINAIRE MANUFACTURER)

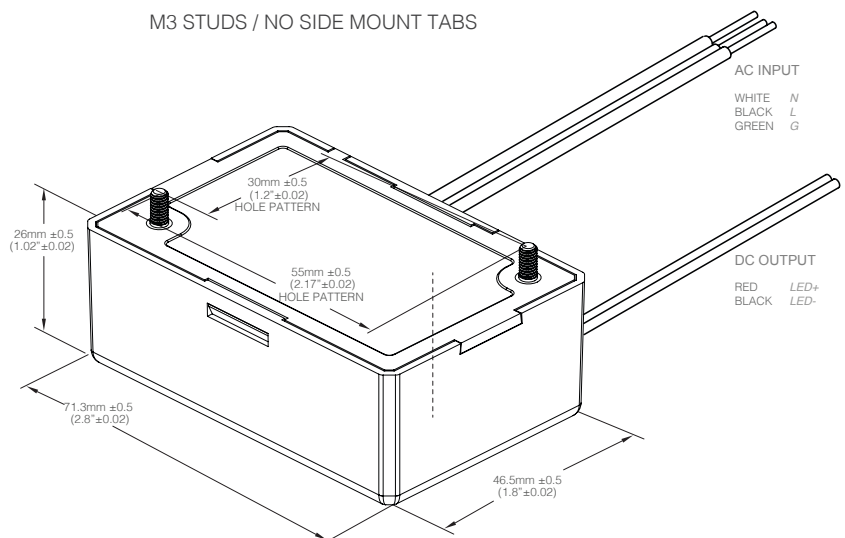
## LABELS

### Example Label



## ALTERNATE CASE STYLE

M3 STUDS / NO SIDE MOUNT TABS



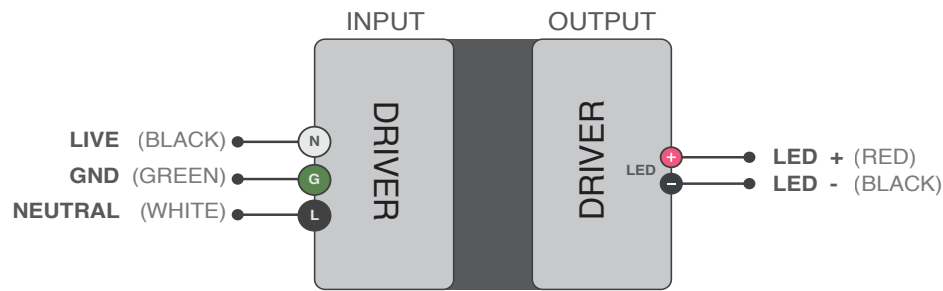
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## Specification Data

<b>Output<sup>3</sup></b>	Max Power	19.2W MAX (See Available Models for variant specific data)
	Max Output Current	0.80A
	Output Voltage Range	24Vdc
	Line Regulation <sup>3</sup>	±5%
	Load Regulation <sup>3</sup>	±5%
	Turn On/Off Time	500ms (at full load)
	Stand-by Power	0.4W
<b>Input</b>	Voltage Range <sup>3</sup>	120 ~ 277Vac Nominal (108 ~ 305Vac Operational)
	Max Input Power	23W
	Frequency Range	47 ~ 63 Hz
	Power Factor	PFC > 0.9 at ≥ at 500mA <sup>3</sup>
	THD	THD < 20% at ≥ at 500mA <sup>3</sup>
	Typical Inrush Current	<75A @ 25°C, 120VAC (cold start with full load)
<b>Protection</b>	Short Circuit	TBC. NEMA 410 compliant
	Over Load	2.2A
	Over Temperature	Unit shuts down & resets at hotspot greater than 90°C (shut down after reaching Tcritical)
<b>Environment</b>	Working Temperature	-20°C ~ 55°C ambient <sup>1</sup> (Tc rated for 90°C)
	Working Humidity	20% ~ 90% RH non-condensing
	UL Rating	Dry / Damp location use
	Storage Temperature	-40°C ~ 85°C ambient
	Storage Humidity	10% ~ 90% RH non-condensing
	Vibration & Impact Resistance	3 ~ 50Hz 1g (for 30 minutes) / 1 g/s (Impact Resistance)
	Operating Life	50,000 Hours @ 800mA (Tc < 75C)
<b>Safety &amp; EMC</b>	Safety Standards	UL8750, Class 2 (UL1310), Class P rated
	Noise Rating	Class A (Less than 24dB measured at 1 meter) <sup>3,6</sup>
	EMI Conduction & Radiation	Compliant with FCC CFR Title 47 Part 15 Class A CAN ICES (A) / NMB-005 (A) Compliant with European CE Requirements
	EMC Susceptibility	EN61000-4-3, EN61000-4-2, EN61000-4-4
	Transient Immunity	2kV/1kA Combination, 2.5kV Ringwave Modes: L-N
		<i>For applications with higher surge protection requirements, pair with XenerQi's lighting optimized surge protectors:</i>
		10K Surge Protection: XEL-PA10S-277 / XEL-SU10C-277 20K Surge Protection: XEL-PA20S-277 / XEL-SU20C-277

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## Typical Application & Wiring Diagram



## Ordering Codes & Available Models

ORDER CODE ('X' indicates type/feature selection)

**XEL-020CTU-CAAAAB-NNA01U**

Current Rating  
(see model table below)

Part Number / Ordering Codes (Replace X with case choice)		Output Current (mA)	Output Voltage Range (V)	Maximum Efficiency <sup>6,7</sup>	Max Output (W)
FIXED Output Current Variants	XEL-020CTU-V024XE-NNA01U	800	24	84.2%	19.2W
	Customized Variants available upon request.				

<sup>1</sup> Ambient is estimated. Actual temperatures determined by trigger point temperature at driver hotspot. Assumed case is correctly mounted on flat surface.

<sup>2</sup> Warranty refers to operation for conditions listed under "Operating Life". For specific warranty details refer to XenerQi published warranty document.

<sup>3</sup> Parameters guaranteed only over nominal input range.

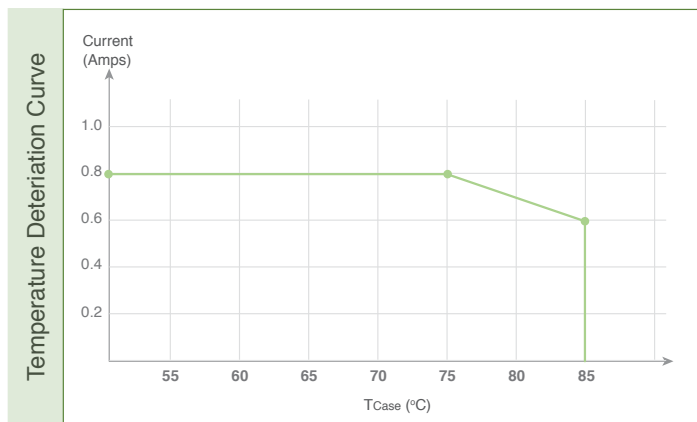
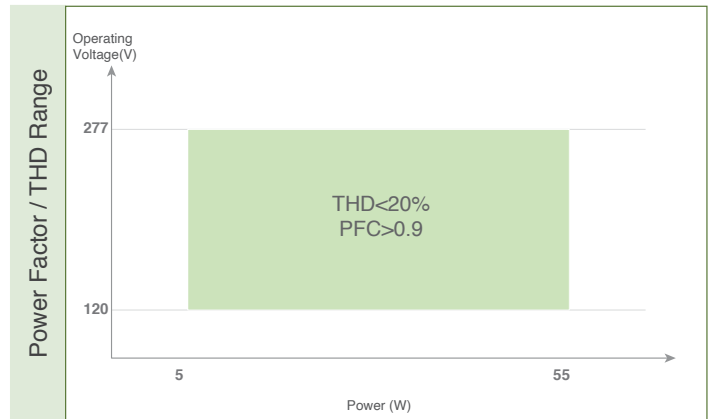
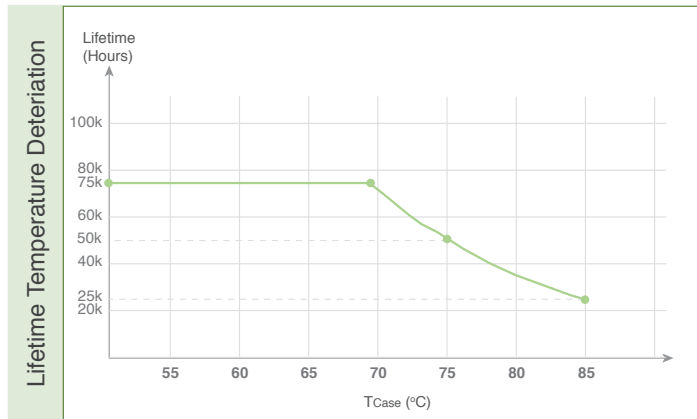
<sup>4</sup> Shutdown requires power cycle to recover.

<sup>5</sup> Tested under two conditions: with & without dimmer connected.

<sup>6</sup> Value listed is family maximum or minimum best case value as appropriate & can vary depending on part number.

<sup>7</sup> Driver is designed to meet the 2019 flicker recommendations from IEEE/NEMA with an emphasis on human factors engineering. When the driver is utilized with the appropriate LED load and conditions, the Luminaire should be able to meet IEEE-1789 recommendations for Green/Low-Risk.

## Operation Performance-Family



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