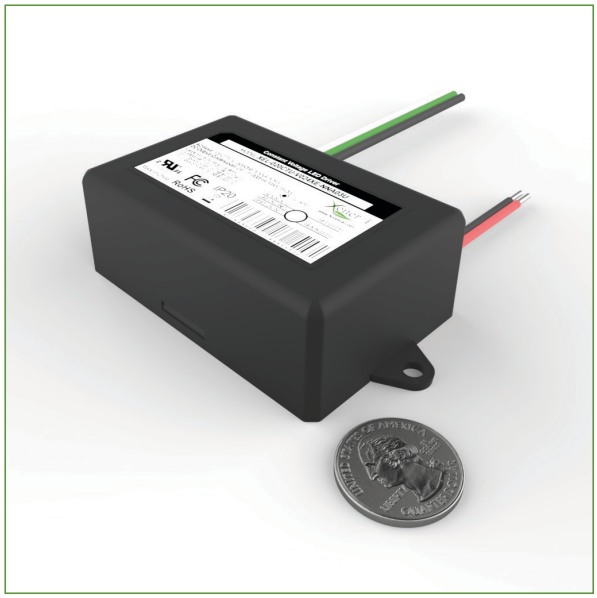
Compact™ CV Series

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 I_{OUT})
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 miliseconds
- 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_{case} rated for 90°C)
- XenerQi Industry Leading 5 Year Warranty[2]
- Class A Noise Rating
- Complies to FCC CFR Title 47 Part 15

See product specific data pages for details.

Typical Applications

sales@xenerqi.com
www.xenerqi.com

Revision No#: 004F-21-07

Dimensions & Installation

(not to scale)

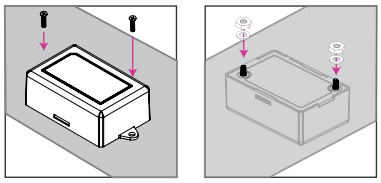
CASE

Material	Plastic (UL94 V-0)
Unit Weight	150g (±5)
Dimensions (CRU)	89.2mm x 46.5mm x 26mm / 3.5” x 1.8” x 1.02”
Dimensions (CSU)	71.3mm x 46.5mm x 26mm / 2.8” 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”)

MOUNTING & INSTALLATION

Fixings	2x M3*10mm / 5-40*3/18” Fastners
Installation (CRU/CSU)	

WARNING: TO REDUCE THE RISK OF FAILURE / INJURY

DRIVER CASE MUST BE ELECTRICALLY GROUNDED.

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)

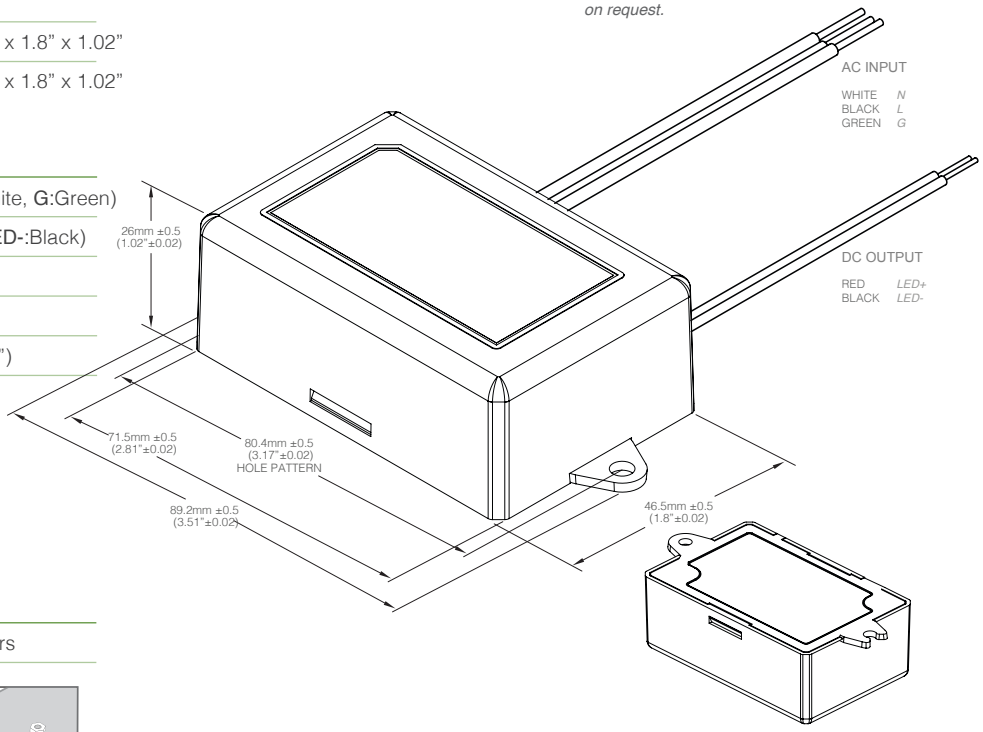
LABELS

Example Label

DIMENSIONS (STANDARD CASE)

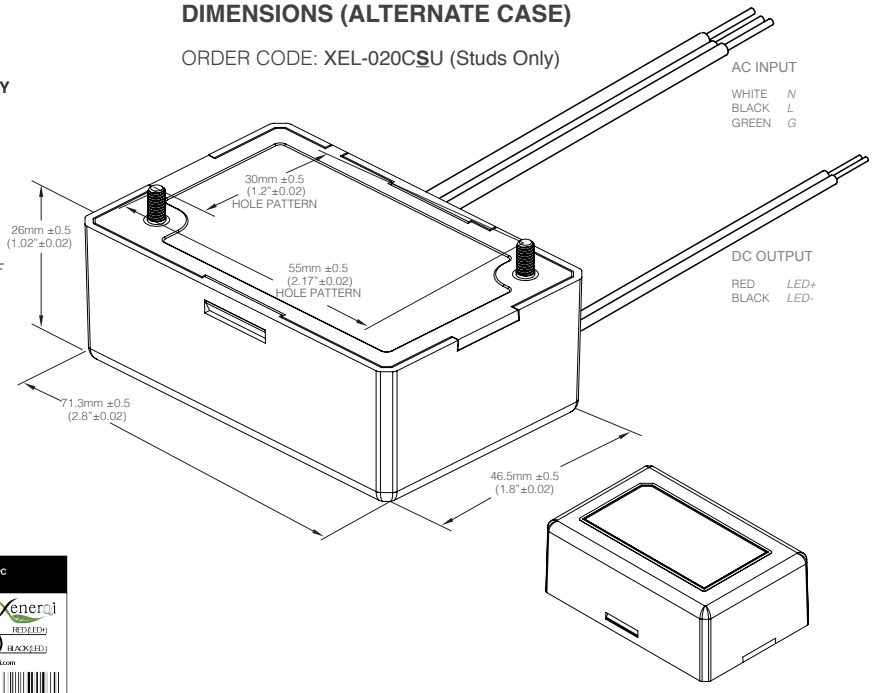
ORDER CODE: XEL-020C**R**U (Tabs, No Studs)

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



DIMENSIONS (ALTERNATE CASE)

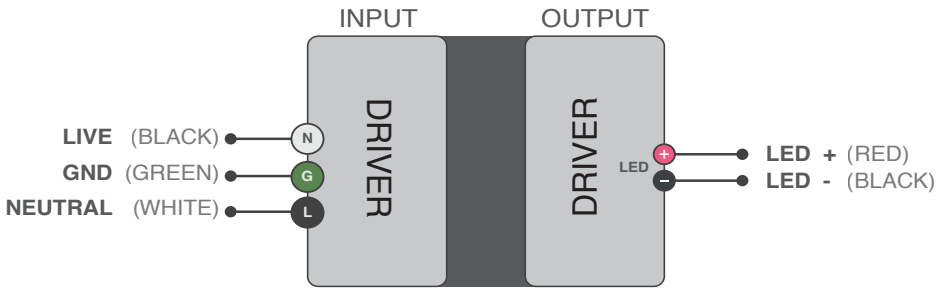
ORDER CODE: XEL-020C**S**U (Studs Only)



Specification Data

Output[3]	Max Power	19.2W MAX (See Available Models for variant specific data)
	Max Output Current	0.80A
	Output Voltage Range	24Vdc
	Line Regulation[3]	±5%
	Load Regulation[3]	±5%
	Turn On/Off Time	500ms (at full load)
	Stand-by Power	0.4W
Input	Voltage Range[3]	120 ~ 277Vac Nominal (108 ~ 305Vac Operational)
	Max Input Power	23W
	Frequency Range	47 ~ 63 Hz
	Power Factor	PFC > 0.9 at ≥ at 500mA[3]
	THD	THD < 20% at ≥ at 500mA[3]
	Typical Inrush Current	<75A @ 25°C, 120VAC (cold start with full load)
Protection	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)
Environment	Working Temperature	-20°C ~ 55°C ambient[1] (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)
Safety & EMC	Safety Standards	UL8750, Class 2 (UL1310)
	Noise Rating	Class A (Less than 24dB measured at 1 meter) [3,6]
	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 *For applications with higher surge protection requirements, pair with XenerQi's lighting optimized surge protectors:* 10K Surge Protection: XEL-PA10S-277 / XEL-SU10C-277 20K Surge Protection: XEL-PA20S-277 / XEL-SU20C-277

Typical Application & Wiring Diagram



Ordering Codes & Available Models

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

XEL-020C&U-VAAAAB-NNA01U

Voltage Rating
(see model table below)

Case Style
R: Side Mount Tabs
S: Screw Studs/No Tabs

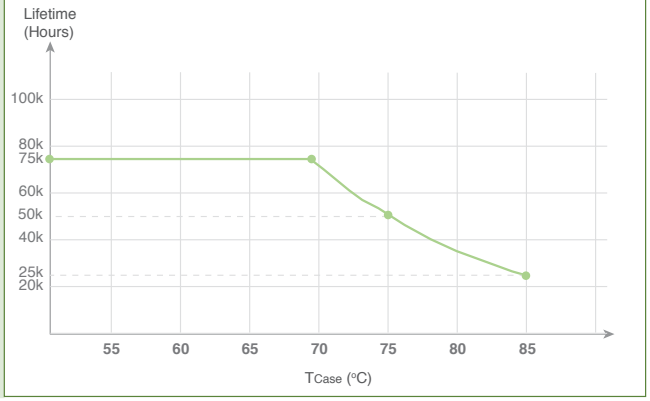
	Part Number / Ordering Codes (Replace X with case choice)	Output Current (mA)	Output Voltage Range (V)	Maximum Efficiency [6,7]	Max Output (W)
STANDARD CASE Available Variants	XEL-020CRU-V024XE-NNA01U	800	24	84.2%	19.2W
ALTERNATE CASE Available Variants	XEL-020CSU-V024XE-NNA01U	800	24	84.2%	19.2W

Customized Variants available upon request.

[1] Ambient is estimated. Actual temperatures determined by trigger point temperature at driver hotspot. Assumed case is correctly mounted on flat surface.
[2] Warranty refers to operation for conditions listed under "Operating Life". For specific warranty details refer to XenerQi published warranty document.
[3] Parameters guaranteed only over nominal input range.
[4] Shutdown requires power cycle to recover.
[5] Tested under two conditions: with & without dimmer connected.
[6] Value listed is family maximum or minimum best case value as appropriate & can vary depending on part number.
[7] 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.

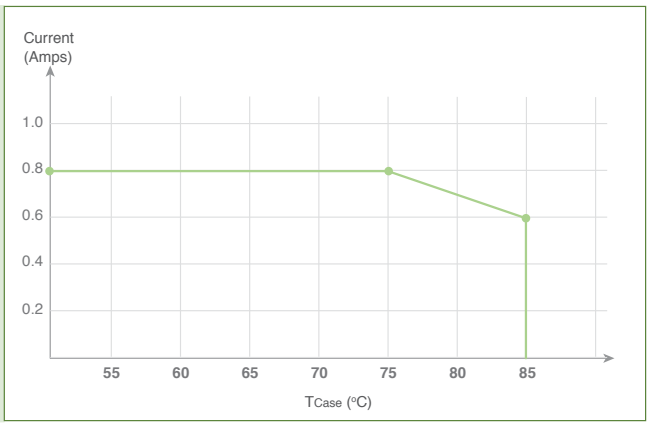
Operation Performance-Family

Lifetime Temperature Deteriation



Power Factor / THD Range

Temperature Deteriation Curve



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