
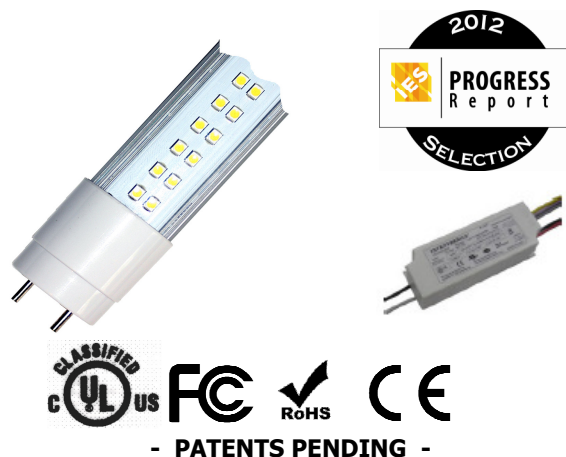


Cardinal™ 4' External Driver Tube

PRODUCT DESCRIPTION

SPECIFICATIONS AND FEATURES	
Length	Four Foot External Driver Version
Wattage	9, 14, 18 watts fixed, 2-20 dimmable
Total Lumens (@5000K)	9 watt >> 1300 lumens 14 watt >> 2030 lumens 18 watt >> 2600 lumens 20 watts >> 2900 lumens
Efficacy (@ 5000K, Clear lens)	145 Lms/Watt
CRI	CRI 82
Total Harmonic Distortion	3.58% (120 VAC) 7.64% (277 VAC)
Duv	Duv = 0.00127
Voltage	120 ~ 277VAC 50-60 Hz
Power Supply Options	RB-9W-132-E, RB-14W-132-E, RB-18W-132-E, RB-20W-132-DIM, RB-40W-132-DIM, RB-88W-132-DIM
Power Factor	0.998 (120 VAC) 0.953 (277 VAC)
Power Input to Tube	Double ended, Low voltage, 32-40 VDC, constant current regulation, Polarity not important
Endcaps	G13 Bi-Pin, rotatable option available
LED Elements	288 LEDs, Surface Mount Devices (SMDs)
Color Temperature	3500K, 4100K, 5000K +/- 200°K (3 McAdam Ellipses)
cULus listed 	E347929, E363806, E 357319, E362805, E341042 Dry or Damp Locations
Beam Angle	120° (Clear Lens Installed)
Size	48"
Operating Temperature	-40 °F to 110 °F
Certifications	UL, cUL, RU, 1993, 1598, 1598(B), 1598(C) 8750, FCC, CE, RoHS
DesignLights Consortium	32 RedBird models on the DLC List Highest efficacy LED tube on the DLC list
Warranty	10 Years warranty@redbirdled.com
Lifetime	100,000 Hours (LM-80 available)

Cardinal™ Linear Lights are high quality replacements of standard fluorescent tubes (T8 and T12) and provide electrical savings of > 50%. Installation is easy with the same G13 Bi-Pin connections as fluorescent tubes and a universal voltage external driver to mount where the old fluorescent ballast had been located. Very tightly binned surface mount device LEDs are employed to provide a 100,000+ hour lifetime, a measured efficacy of >145 lms/watt and a CRI=82. Exceptional thermal management is achieved with an aluminum core LED PCB thermally bonded to the ribbed aluminum heat sink with a 'D' channel extrusion made from 6063-T5 alloy for optimal heat conduction. The lens over the LEDs is a tough polycarbonate design available as crystal clear or a frosted option. Solid brass, nickel-plated terminal pins are installed in end-caps that are fastened with screws to the aluminum core. If the application needs it, a no-cost, rotatable end-cap option can be specified as well. All of these features and being the first Led tube earn DesignLights Consortium's Qualification helped the Cardinal™ LED Tube win the IES Progress Committee Selection for 2012..



ORDERING INFORMATION

Size - Form - Color Temp - Model - E, DIM, F

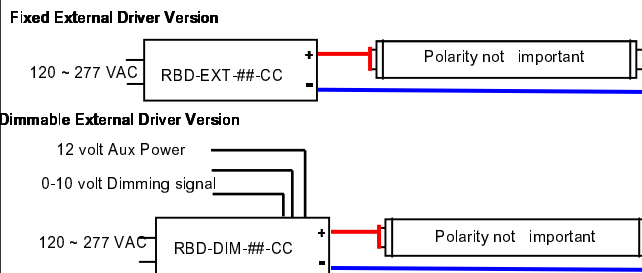
L4-4 foot - 18W - 41K-4100 K - 132 - ROT -E-F

Ordering Example: L4-18W-41K-132-E-F is uses one RBD-EXT-18W-CC, 18 watt, constant current driver connected to a 4' LED Linear Replacement Lamp employing 4100K CCT LEDs and a frosted lens.

Dimmable configurations are one RBD-DIM-20W-CC power supply to drive each 4' LED tubes, one RBD-DIM-44W-CC drive two 4' tubes or one RBD-DIM-88W-CC to drive four 4' tubes.

CONNECTION METHOD

Remove fluorescent ballast. Install the External Driver and wire as shown below. The same basic connections apply whether the power supply is a fixed version or a dimmable version.



NOTE: The External Driver versions of the Cardinal™ LED tubes use a double-ended power input design for the low voltage, 32-40 VDC, constant current power supplied by the external driver.