# ES40 LIGHT
## ES Series with Internal Driver

**Series CON**

## ELECTRICAL:

| | |
|---|---|
| Input Voltage: | 12 to 26.4VDC |
| Input Current: | 80mA typical (320mA max for burst) @24VDC |
| | 120mA typical (620mA max for burst) @12VDC |

*Note: Power supply must be capable of 320mA per light for burst feature to work correctly.*

| | |
|---|---|
| Strobe Input Impedance: | 10KΩ – PNP typical, 9.1KΩ – NPN typical |
| Strobe Timing: | <20 microseconds from strobe to LED on |
| 0-10V Input Impedance: | 15KΩ typical |
| 0-10V Input Control: | 0V = 100%, 10V = 0% LED current.  (Can be left disconnected for 100% LED current) |
| Variable Intensity: | Adjustable via trim potentiometer from 0% (CCW) to 100% (CW). |
| Over-temperature LED: | 65 ± 5°C strobe disable / "Error" LED on; 5°C hyst. for strobe enable / "Error" LED off |

Wiring:

| Pin # | Wire Color | Function |
|---|---|---|
| 1 | Brown | +12 to +26.4VDC |
| 2 | White | NPN STROBE INPUT: GND for "ON", Open or >Vin-1V for "OFF" |
| 3 | Blue | 0VDC (DC GND) |
| 4 | Black | PNP STROBE INPUT: < 1 VDC for "OFF", >3 ≤30 VDC for "ON" |
| 5 | Grey or Green/Yellow | 0-10VDC analog intensity control – 0V = 100%, 10V = 0% |
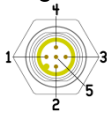
## ENVIRONMENTAL:

| | |
|---|---|
| Operating Temperature: | 0 to 40°C |
| Relative Humidity: | 5 to 85% non-condensing |

## MECHANICAL:

| | |
|---|---|
| Lighted Area: | 40mm |
| Connector: | M12 - 5 pin |
| Weight: | 3.88 oz (110g) |

## ILLUMINATION:

| | |
|---|---|
| Light Source: | LED – available in 4 Colors and IR |
| Quantity HB LED's: | 1 |
| LED Lens: | 16° FWHM Standard |
| | 23° FWHM Optional |
| | 39° FWHM Optional |
| | 44x15° FWHM Line Optional |
| LED Life: | up to 50,000 hours*. |

*Contact us for LED life information



Additional stickers to cover Switch / Potentiometer holes

## FEATURES:

- Built-in Driver
- Aluminum Single Interface Housing
- Auto Burst – LED high current for 500µs ±10% (burst pulse width repeatability ±1% same light), then drops to standard current
- Auto Burst Disable Switch
- 0-10VDC Intensity Control
- Potentiometer Intensity Control
- PWM Dimming Capable (with Auto Burst disabled)
- Internal Thermal Protection
- Robot Friendly Weight – 3.88 oz (110g)

## PART NUMBER DESIGNATION:    ES40–XXX

XXX = Light Color - 470, 530, 630, 850, WHI

| Color | Dash # | λ Dominant Typical | λ Dominant Range | Spectral Half-width Δλ½ | λ Peak Typical | Units | Typical mW per LED |
|---|---|---|---|---|---|---|---|
| Blue | -470 | 465 | 455 - 475 | 21 | 453 | nm | 420 |
| Green | -530 | 530 | 525 - 535 | 39 | 518 | nm | 175 |
| Red | -630 | 625 | 618 - 630 | 17 | 632 | nm | 200 |
| Infrared | -850 | 850 | n/a | 30 | 860 | nm | 190 |
| Pure White | -WHI | Color Temp  5700 - 7000K  CRI 70 typ | | | | | 360 |

*Other colors available on request*