

Laser illumination system

Up to 400W lighting power

640nm wavelength

Flexible triggering/
synchronisation



The Specialised Imaging LUX640 laser illumination system provides up to 400W of lighting power at pulse frequencies up to 10MHz or single pulses up to 30 μ S.

Simple triggering allows the SI-LUX640 to interface with most high-speed cameras ranging from High-speed video to Ultra highspeed framing cameras.

The 2m laser output light guide includes user interchangeable low coherence beam expanders.

FEATURES

- Low coherence
- Pulse width from 10ns – 30 μ s
- Pulse frequency range from single to 10MHz
- Compact design

OPTICAL

| | |
|----------------|--|
| Beam Expanders | φ25mm and φ50mm versions |
| Wavelength | 640nm ± 6nm |
| Output power | 200W (-10/ + 30%) or 400W (-10/ + 20%) |
| Power drop | ~ 0.2% / μS for pulses less than 5μS |

INPUT / OUTPUT SIGNALS

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|------------------|--|
| Sync. Input | 5V TTL (BNC socket connector) (laser pulse duration = duration of +5V state) |
| Indicators | Green LED – Laser is powered & ready |
| Software | Custom software compatible with Microsoft Windows Operating Systems for Control. |
| Electrical Power | 100-240V AC 2A 50-60Hz |

HEALTH & SAFETY

| | |
|------------------|--|
| Laser rating | Class 3b |
| Safety features | Key operated master control power on/off Connector for remote Interlock |
| Visual indicator | Green LED = Laser is powered & ready Red LED = interlock indicator Health & Safety on laser body |

ENVIRONMENTAL

| | |
|-----------------------|------------------------------------|
| Storage temperature | -10°C to +50°C |
| Operating temperature | -5°C to +40°C |
| Humidity | 10—90% RH non condensing |
| Vibration shock | 10—40 Hz Max. 10g in any direction |
| EMC | Meets all EC harmonised standards |

TIMING PARAMETERS

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|----------------------------|--|
| Max pulse rate | 10MHz |
| Min. single pulse duration | ~10ns |
| Max. single pulse duration | 30μS (max. power drop 20%) |
| Rise time | ~10ns (10%...90%) |
| Fall time | ~5ns |
| Delay | 70ns between input to start of light pulse (incl. control cable delay) |
| Jitter | <5ns |
| Operating limits | Max. 0.03% duty cycle for unlimited operation Max. 100% duty cycle for 30μS laser operation |

MECHANICAL

| | |
|-------------------|--|
| Dimension (w/d/h) | Laser: 6.2cm x 15cm x 3.6cm (6" x 2.4" x 1.4") Master control box: 12cm x 6cm x 12cm (4.7" x 2.4" x 4.7") |
| Weight | Laser: 0.5Kg (1.1lbs) Master control box: 0.5Kg (1.1lbs) |
| Light guide | 2m |
| Control cable | 2m between control/safety box & laser |

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