TECHNIQUIP

TALON

PRECISION ILLUMINATION

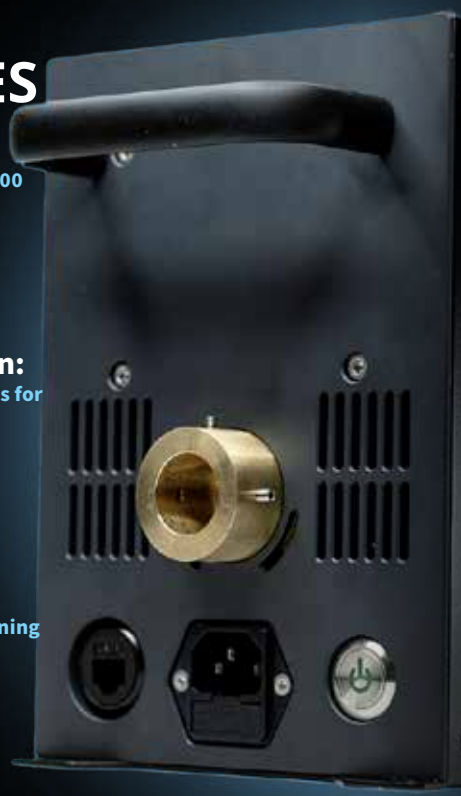
FOR LIFE SCIENCES, INDUSTRIAL INSPECTION & SEMICONDUCTOR APPLICATIONS

UNLEASH THE FULL POTENTIAL OF YOUR OPERATIONS WITH TALON

The Talon Fiber Optic Illumination System is a cutting-edge solution for precision radiometric energy injection into fiber optic or liquid light guides. Leveraging advanced LED technology, the Talon system provides exceptional power and speed, making it ideal for applications in life sciences, industrial inspection, and semiconductor manufacturing.

KEY FEATURES

- **High Power:**
  Radiometric power level in excess of 200 mw / mm^2 at light guide entry plane
- **Rapid Pulsing:**
  Delivers rapid ON/OFF pulsing with superior optical power
- **Multi-Channel LED Design:**
  Supports over 12 distinct LED channels for versatile applications
- **Robust / Intuitive GUI:**
  Allows for calibration, configuration, operation, strobing, and monitoring
- **Enhanced Cooling:**
  Active cooling mechanism for maintaining optimal fiber performance



WHY CHOOSE TALON

- **Cost-Effective Ownership:**
  Long lifespan and no recurring bulb replacement costs
- **Reduced Environmental Impact:**
  Mercury-free and energy-efficient LED technology
- **Improved Cell Viability:**
  Reduced photobleaching and minimized heat output to protect live cells
- **Energy Efficiency:**
  Consumes less energy, with no hazardous waste or bulb replacements required.
- **Dimming Range:**
  Over 4,000 dimming steps (across user-configurable power range)
- **Linear Response:**
  Calibrated to provide linear (dimming level vs. radiometric output) output.
- **FlickerFree:**
  Extremely low levels of flicker (-50dB)
- **High Reliability:**
  Long MTBF

TYPICAL APPLICATIONS

- **Fluorescence Microscopy:**
  Enables accurate molecular tracking and protein localization
- **Live Cell Imaging:**
  Ideal for time-lapse and real-time imaging with minimal phototoxicity
- **Improved Cell Viability:**
  Reduced photobleaching and minimized heat output to protect live cells
- **Confocal Microscopy:**
  Supports spinning disk and laser scanning techniques
- **Super-Resolution Imaging:**
  Compatible with methods like PALM and STORM
- **Optogenetics & Ratiometric Imaging:**
  Provides precise light sources for cellular and molecular studies.
- **Machine Vision Systems:**
  Enhances imaging for automated inspection and quality assurance processes
- **Semiconductor Inspection:**
  Provides precise and stable illumination for examining semiconductor wafers and components

ENVIRONMENTAL SPECIFICATIONS

- **Temperature:**
  0°C to 40°C (Operating) / -10°C to 70°C (Storage)
- **Humidity:**
  0–20% RH / 10–80% RH (Storage)
- **Vibration Resistance:**
  1G operating, 3G transport

COMMUNICATIONS SPECIFICATIONS

- **Ethernet:**
  Provides high-speed connectivity for command and data exchange
- **USB:**
  Enables plug-and-play operation with compatible devices
- **RS-232:**
  Offers reliable serial communication for integration with legacy systems

MECHANICAL SPECIFICATIONS

- **Size:**
  11.3 in. / 287 mm Deep by 8.0 in. / 203 mm tall by 5.7 in. / 145 mm wide
- **Weight:**
  20.1 lbs
- **Enclosure:**
  Powder and Ceramic Coated Galvanized Steel
- **Airflow:**
  Front (Intake), Rear (Exhaust)
- **CE Certified / RoHS Compliant**
- **Built-in safety mechanisms:**
  - Thermal Monitoring (6 Channels)
  - Fan Monitoring (2 Channels)
  - Automated Electronic Shutter.
  - Ferrule Detection

ELECTRICAL SPECIFICATIONS

- **Power Input:**
  100-264 VAC, 50-60Hz – Up to 500 Watts (depending on configuration)
- **Processor Operating Frequency:**
  ~760 kHz for flicker minimization

OPTICAL SPECIFICATIONS

- **Spectral Peaks and Bandwidth:**
  (specify – multiple options available)
- **Processor Operating Frequency:**
  ~760 kHz for flicker minimization
- **Dimming Range:**
  1%–100% with 4096 levels of resolution
- **Angular Uniformity and Distribution:**
  Low-angle uniform irradiance

For additional support or customization inquiries, contact our factory support team at 925-251-9030

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