

# VARIO2<sup>IP</sup> PoE

Medium and Long Range Infra-Red Illuminators

rayTEC<sup>®</sup>



## Dedicated IP Lighting with PoE

Remote control from anywhere on the network. Easy set-up, commissioning, operation and maintenance, minimising labour time and costs whilst maximising performance 24/7.



## Ultra-Powerful

VARIO2 i16 is the most powerful single panel IP PoE illuminator on the market, delivering outstanding distances of up to 500m (1,640ft).



## Platform Integration

VARIO2 IP provides a dedicated API for seamless integration into 3rd party technology platforms such as VMS, BMS and Access Control Systems.



## VARIO Interchangeable Lens System

Angle of illumination from 10 - 120° can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert to match the specific camera field of view.



## Advanced Security

VARIO2 IP illuminators offer greater levels of security, including stricter access controls and HTTPS. Health monitoring and lifetime diagnostics also provide insight into the illuminator's history and status.



## Hot-Spot Reduction Technology (HRT)

The HRT system delivers a highly diffused, elliptical beam system to deliver more light where it's needed most. Also prevents overexposure of foreground subjects.

## 5 YEAR WARRANTY

All Raytec luminaires are provided with an industry leading 5 year warranty and have an expected useful life in excess of 10 years. See Warranty Statement for details.



# Technical Specifications

| Illuminator                         | i4                                                                                                                                                      | i6                                           | i8                                                       | i16                                                      |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Max Distance                        | 144m (472ft)                                                                                                                                            | 200m (656 ft)                                | 350m (1148 ft)                                           | 500m (1,640ft) - DC supply<br>420m (1378ft) - PoE supply |
| Angle                               | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses. Additional optional lenses: 80° x 30°, 120° x 50° |                                              |                                                          |                                                          |
| Input                               | PoE+ IEEE 802.3at or 24V DC                                                                                                                             | PoE+ IEEE 802.3at or 24V DC                  | 60W PoE (4-pair PoE)*<br>IEEE 802.3bt Class 6^ or 24V DC | 90W PoE (4-pair PoE)*<br>IEEE 802.3bt Class 8 or 24V DC  |
| Consumption                         | 15W (25W for 940nm variants)                                                                                                                            | 25W                                          | 51W                                                      | 93W - DC supply<br>71W - PoE supply                      |
| Standby Power Draw (Status LEDs on) | 2W                                                                                                                                                      |                                              |                                                          |                                                          |
| Data Input                          | Cat 5 Cable                                                                                                                                             |                                              |                                                          |                                                          |
| HTTPS                               | Encryption algorithm: ECDSA (256 bit private keys)                                                                                                      |                                              |                                                          |                                                          |
| HTTPS Certificate                   | DiscoMan Version 2 required for certificate generation by DiscoMan                                                                                      |                                              |                                                          |                                                          |
| Beam Shape                          | Elliptical with HRT<br>(Hot-spot Reduction) Technology                                                                                                  |                                              |                                                          |                                                          |
| Beam Angle System                   | VARIO Interchangeable Lens System                                                                                                                       |                                              |                                                          |                                                          |
| LED type                            | Platinum Elite SMT LEDs                                                                                                                                 |                                              |                                                          |                                                          |
| Number of LEDs                      | 9 (12 for 940nm variants)                                                                                                                               | 12                                           | 24                                                       | 48                                                       |
| Wavelength                          | 850nm (940nm options available)                                                                                                                         | 850nm                                        | 850nm (940nm options available)                          | 850nm (940nm options available)                          |
| IP rating                           | IP66                                                                                                                                                    |                                              |                                                          |                                                          |
| Temperature Range                   | -50° to +50°C (-58 to 122°F)                                                                                                                            |                                              |                                                          |                                                          |
| Colour                              | Black                                                                                                                                                   |                                              |                                                          |                                                          |
| Weight                              | 950g (2.1lbs)                                                                                                                                           | 950g (2.1lbs)                                | 1.65kg (3.6lbs)                                          | 3.16kg (7lbs)                                            |
| Dimensions                          | 100 x 135 x 66mm<br>(4" x 5" x 2.5" approx.)                                                                                                            | 100 x 135 x 66mm<br>(4" x 5" x 2.5" approx.) | 135 x 180 x 68.2mm<br>(5" x 7" x 2.6" approx)            | 180 x 277 x 75mm<br>(7" x 11" x 2.9" approx.)            |
| Cable Length                        | 2 x 2.5m<br>(Supplied with RJ45 Connector, please refer to installation guide)                                                                          |                                              |                                                          |                                                          |
| Bracketry                           | U bracket included<br>VUB Bracketry also available (Optional)                                                                                           |                                              |                                                          |                                                          |
| Minimum System Requirements         | PC running Windows with network access and a modern web browser                                                                                         |                                              |                                                          |                                                          |
| Country of Manufacture              | United Kingdom                                                                                                                                          |                                              |                                                          |                                                          |

^ bt compatibility only available on illuminators with serial numbers ending in 120000 onwards.

\* Single signature 24.9K and 12.5K detection resistance. Contact Raytec for further information.

# Technical Specifications

## Integrated Command and Control Technology

|                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hardware Features                                                                               | <ul style="list-style-type: none"> <li>• In-built photocell for automatic on/off operation</li> <li>• Configurable external output</li> <li>• External telemetry input</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Quick Access Software Features<br>(provided as standard via integrated web interface)           | <ul style="list-style-type: none"> <li>• Individual or group control (Groups up to 16 units)</li> <li>• Power On/Off</li> <li>• Power control: 20-100%</li> <li>• Boost: 110% power for 10 seconds</li> <li>• Deterrent feature with selectable patterns and speeds</li> </ul>                                                                                                                                                                                                                                                                                                                                                            |
| Advanced User Defined Software Features:<br>(provided as standard via integrated web interface) | <ul style="list-style-type: none"> <li>• Timer functions</li> <li>• Soft start turn on</li> <li>• 3 x deterrent patterns</li> <li>• 3 x deterrent speeds</li> <li>• Selectable external telemetry input: volt – free or TTL</li> <li>• Photocell sensitivity trigger level</li> <li>• Assign illuminator to group for collective control</li> <li>• Assign name, group name and IP address</li> <li>• Restore factory defaults</li> <li>• Restart/reboot</li> <li>• Software upgrade</li> <li>• Supported protocols include HTTP, Local and VMS operating modes (including combinations)</li> <li>• Ping command functionality</li> </ul> |
| System Integration<br>(Application Programming Interface)                                       | <ul style="list-style-type: none"> <li>• API for integration into 3rd party platforms</li> <li>• API for integration into network devices via HTTP commands</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### Security and Diagnostics

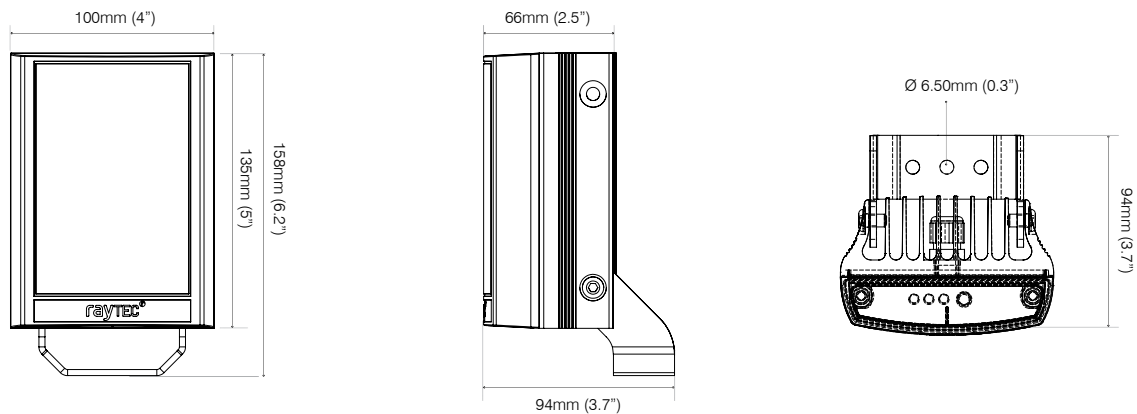
- Advanced security
- HTTPS
- Lifetime diagnostics
- Advanced diagnostics with health monitoring
- Administrator and user access levels
- Password Protection: create user and administrator passwords

## POWERS – The Open Lighting Standard

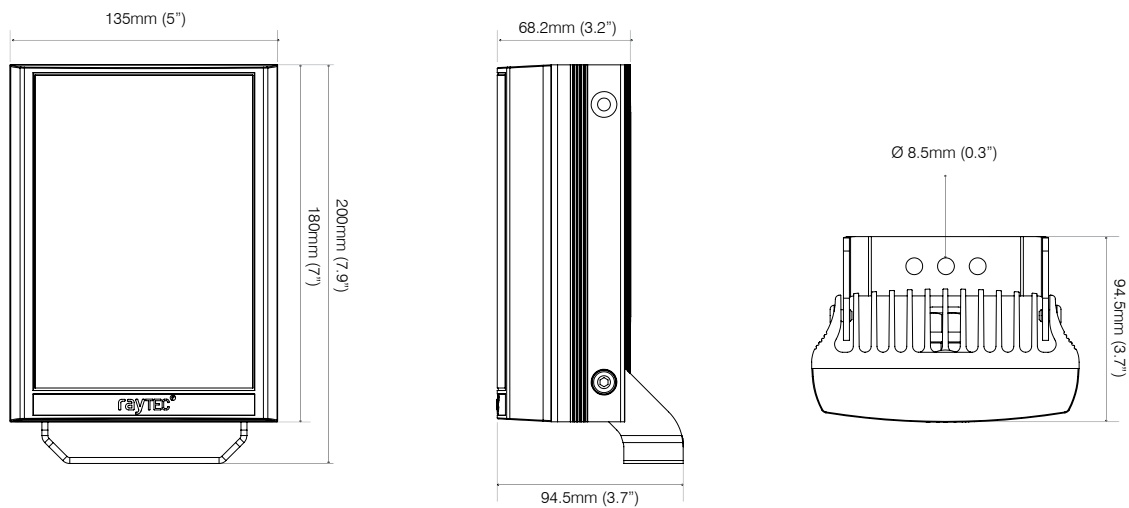
Specifications and distances based on the POWERS lighting standard.  
For full POWERS data and A&E specifications please contact  
[sales@raytecled.com](mailto:sales@raytecled.com)

# Dimension Drawings

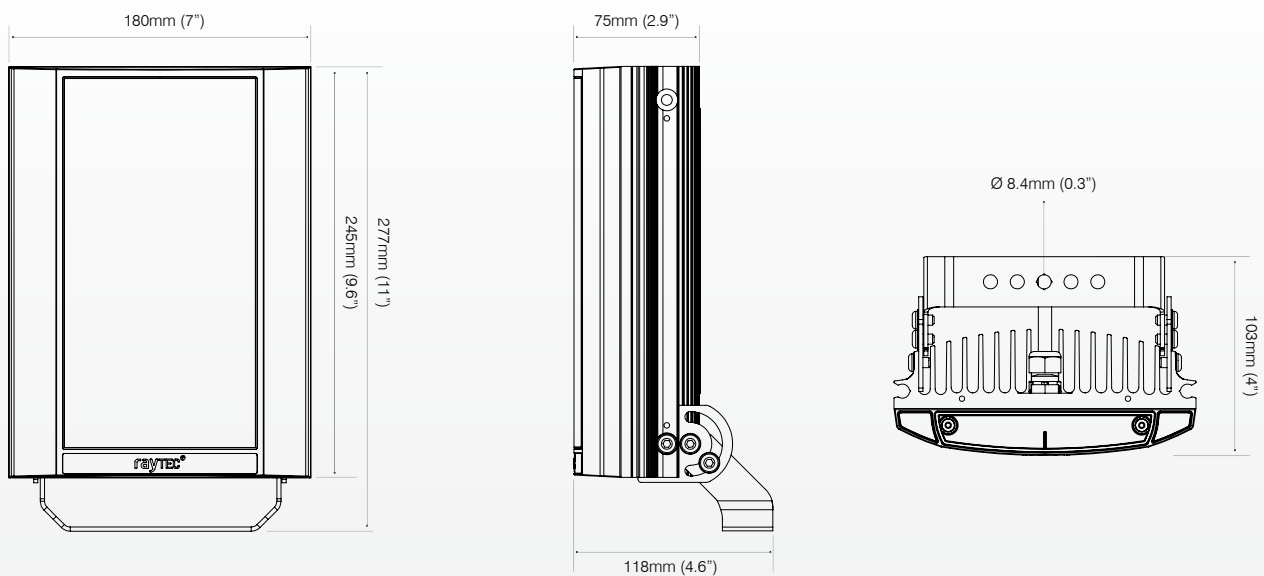
## VARIO2 IPPoE i4-1 and VARIO2 IPPoE i6-1



## VARIO2 IPPoE i8-1



## VARIO2 IPPoE i16-1



# Product Codes

| Part Codes         | Description                                                                                                                      | Angles                        | Distances                                               |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------|
| VAR2-IPPOE-i16-1   | VARIO2 IP PoE i16 Network Illuminator, 3 angle options included, 90W 4-pair PoE IEEE 802.3bt or 24V DC power input, black, 850nm | 10 x 10°                      | 500m (1640ft) - DC supply<br>420m (1378ft) - PoE supply |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | 250m (820ft) - DC supply<br>210m (689ft) - PoE supply   |
|                    |                                                                                                                                  | 60 x 25°                      | 135m (443ft) - DC supply<br>113m (372ft) - PoE supply   |
|                    |                                                                                                                                  | 80 x 30° (optional)           | 105m (344ft) - DC supply<br>88m (289ft) - PoE supply    |
|                    |                                                                                                                                  | 120 x 50° (optional)          | 65m (213ft) - DC supply<br>55m (179ft) - PoE supply     |
| VAR2-IPPOE-i16-1-c | VARIO2 IP PoE i16 Network Illuminator, 3 angle options included, 90W 4-pair PoE IEEE 802.3bt or 24V DC power input, black, 940nm | 10 x 10°                      | Contact Raytec                                          |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | Contact Raytec                                          |
|                    |                                                                                                                                  | 60 x 25°                      | Contact Raytec                                          |
|                    |                                                                                                                                  | 80 x 30° (optional)           | Contact Raytec                                          |
|                    |                                                                                                                                  | 120 x 50° (optional)          | Contact Raytec                                          |
| VAR2-IPPOE-i8-1    | VARIO2 iP PoE i8 Network Illuminator, 3 angle options included, 24V DC or 60W 4-pair PoE IEEE 802.3bt or 24V DC, black, 850nm    | 10 x 10°                      | 350m (1148ft)                                           |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | 165m (541ft)                                            |
|                    |                                                                                                                                  | 60 x 25°                      | 95m (311ft)                                             |
|                    |                                                                                                                                  | 80 x 30° (optional)           | 70m (230ft)                                             |
|                    |                                                                                                                                  | 120 x 50° (optional)          | 45m (148ft)                                             |
| VAR2-IPPOE-i8-1-c  | VARIO2 iP PoE i8 Network Illuminator, 3 angle options included, 60W 4-pair PoE IEEE 802.3bt or 24V DC power input, black, 940nm  | 10 x 10°                      | Contact Raytec                                          |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | Contact Raytec                                          |
|                    |                                                                                                                                  | 60 x 25°                      | Contact Raytec                                          |
|                    |                                                                                                                                  | 80 x 30° (optional)           | Contact Raytec                                          |
|                    |                                                                                                                                  | 120 x 50° (optional)          | Contact Raytec                                          |
| VAR2-IPPOE-i6-1    | VARIO2 iP PoE i6 Network Illuminator, 3 angle options included, PoE+ IEEE 802.3at or 24V DC power input, black, 850nm            | 10 x 10°                      | 200m (656ft)                                            |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | 120m (394ft)                                            |
|                    |                                                                                                                                  | 60 x 25°                      | 70m (230ft)                                             |
|                    |                                                                                                                                  | 80 x 30° (optional)           | 50m (164ft)                                             |
|                    |                                                                                                                                  | 120 x 50° (optional)          | 30m (98ft)                                              |
| VAR2-IPPOE-i4-1    | VARIO2 iP PoE i4 Network Illuminator, 3 angle options included, PoE+ IEEE 802.3at or 24V DC power input, black, 850nm            | 10 x 10°                      | 144m (472ft)                                            |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | 78m (256ft)                                             |
|                    |                                                                                                                                  | 60 x 25°                      | 54m (177ft)                                             |
|                    |                                                                                                                                  | 80 x 30° (optional)           | 36m (118ft)                                             |
|                    |                                                                                                                                  | 120 x 50° (optional)          | 24m (79ft)                                              |
| VAR2-IPPOE-i4-1-c  | VARIO2 iP PoE i4 Network Illuminator, 3 angle options included, PoE+ IEEE 802.3at or 24V DC power input, black, 940nm            | 10 x 10°                      | Contact Raytec                                          |
|                    |                                                                                                                                  | 35 x 10° (fitted as standard) | Contact Raytec                                          |
|                    |                                                                                                                                  | 60 x 25°                      | Contact Raytec                                          |
|                    |                                                                                                                                  | 80 x 30° (optional)           | Contact Raytec                                          |
|                    |                                                                                                                                  | 120 x 50° (optional)          | Contact Raytec                                          |

## Optional Parts

|                    |                                          |
|--------------------|------------------------------------------|
| VAR-i16-LENS-8030  | Individual i16 VARIO lens – 80°H x 30°V  |
| VAR-i16-LENS-12050 | Individual i16 VARIO lens – 120°H x 50°V |
| VAR-i8-LENS-8030   | Individual i8 VARIO lens – 80°H x 30°V   |
| VAR-i8-LENS-12050  | Individual i8 VARIO lens – 120°H x 50°V  |
| VAR-i6-LENS-8030   | Individual i6 VARIO lens – 80°H x 30°V   |
| VAR-i6-LENS-12050  | Individual i6 VARIO lens – 120°H x 50°V  |
| VAR-i4-LENS-8030   | Individual i4 VARIO lens – 80°H x 30°V   |
| VAR-i4-LENS-12050  | Individual i4 VARIO lens – 120°H x 50°V  |

Contact Raytec for other beam angles

## PSU Configuration



PSU-Var2- 20W-1 (small)   PSU-Var2-50W-2 (medium)   PSU-Var2-100W-3 (large)   PSU-Var2-150W-3 (x-large)

| Illuminator Configurations | PSU-Var2-20W-1 (small)                         | PSU-Var2-50W-2 (medium)                                                    | PSU-Var2-100W-3 (large)                                                                                    | PSU-Var2-150W-3 (x-large)                                                     |
|----------------------------|------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Outputs                    | 1 x 24V DC O/P                                 | up to 2 x 24V DC O/P                                                       | up to 3 x 24V DC O/P                                                                                       | up to 3 x 24V DC O/P                                                          |
| Illuminators               | 1 x VARIO 2 series<br>plus aux output (max 8W) | up to 2 x VARIO 4 series<br>up to 2 x VARIO 6 series<br>1 x VARIO 8 series | up to 3 x VARIO 4 series<br>up to 3 x VARIO 6 series<br>up to 2 x VARIO 8 series                           | up to 3 x VARIO 8 series                                                      |
| Other Illuminator options  |                                                | up to 4 x VARIO 2 series*                                                  | up to 8 x VARIO 2 series*<br>up to 4 x VARIO 4 series*<br>up to 4 x VARIO 6 series*<br>1 x VARIO 16 series | up to 6 x VARIO 4 series*<br>up to 6 x VARIO 6 series*<br>1 x VARIO 16 series |

Please note: for medium, large and x-large PSUs powering an increased number of VARIO illuminators, the total power of the illuminators must not exceed the PSU max output.

\*Illuminator output cables may also need to be commoned together to suit the number of available glands.

Mixed model sizes of VARIO illuminators can be powered from the same PSU e.g. PSU-Var2-50W-2 can also run 2 x VARIO 2 series and 1 x VARIO 4 series subject always to maximum PSU output

## Disclaimer

The information provided in this document was accurate at the time of its creation. However, due to the evolving nature of our products and continuous improvements, there may be changes or updates that occur after its publication. For the most current and detailed information about our products, please contact our sales team at [sales@raytecltd.com](mailto:sales@raytecltd.com).