Pulsestar Infra-Red
High Intensity Pulsed Lighting for ANPR/LPR

rayTEC

i72 series

i48 series &
i96 series (2x)
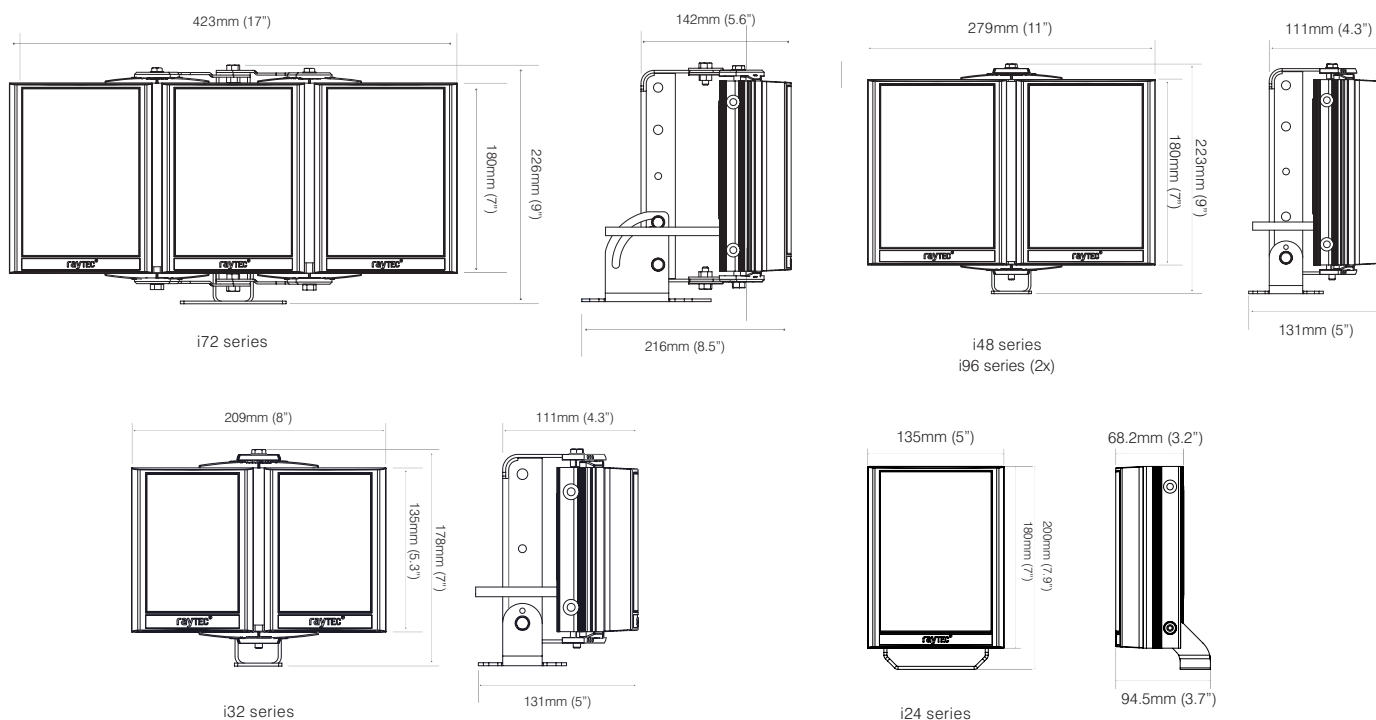

i32 series

i24 series
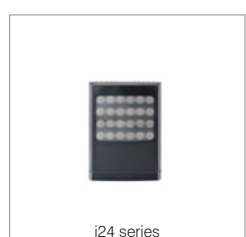
- High Intensity - up to 880W Lighting Drive Power
- Easily link Lighting Pulse with Camera Shutter
- Platinum Elite twin-core SMT LEDs
- Hot-spot Reduction Technology
- VARIO Interchangeable Lens System

- Angles from 10-35 degrees – from 1 product
- Semi-Covert (850nm) or Covert (940nm)
- Extreme Long-Life and Low Maintenance
- Wide Trigger Input Range (TTL - 3.3-24V DC)
- Universal 100-230V AC PSU (24V DC optional)

Pulsestar Infra-Red illuminators deliver powerful pulsed lighting for traffic and machine vision applications including ANPR / LPR.

Every Pulsestar illuminator features PLATINUM Elite twin-core SMT LED technology to deliver outstanding illumination power, and provides significant uplifts in illuminator performance compared to equivalent non-pulsed illuminators. A TTL signal from the camera is required to synchronise the lighting pulse with the exposure of the camera, and the power, duration, and frequency of the pulse can all be adjusted for optimal results at each site. Pulsestar illuminators are long life and low maintenance - perfect for difficult to reach transportation applications.

Pulsestar features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding images. Pulsestar Infra-Red illuminators produce up to 880W of Lighting Drive power for typical distances of up to 60m (197ft) in traffic applications.

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Version 1
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Product Dimensions

423mm (17")
226mm (9")
180mm (7")

i72 series

142mm (5.6")
216mm (8.5")

279mm (11")
223mm (9")
180mm (7")

i48 series
i96 series (2x)

111mm (4.3")
131mm (5")

209mm (8")
178mm (7")
135mm (5.3")

i32 series

111mm (4.3")
131mm (5")

135mm (5")
200mm (7.9")
180mm (7")

i24 series

68.2mm (3.2")
94.5mm (3.7")

Features

Benefits

Features	Benefits
High Intensity Pulsed Illumination	Delivering up to 880W of pulsed Infra-Red lighting, Pulsestar illuminators deliver lighting on-demand for ANPR/LPR and Machine vision applications. Pulsed illumination ensures the highest levels of light on scene to illuminate fast moving objects while extending LED life and maximising energy savings.
Camera Sync	A TTL trigger input allows the illumination to be pulsed in syncronisation with the camera shutter to deliver maximum light levels precisely when needed.
Integrated Pulse Controller	An in-built pulse controller allows the timing, height and width, and the lighting pulse to be tailored for the exact needs of the application, and includes an Ethernet-based communication interface making installation, operation, and maintenance safer and easier.
PLATINUM Elite twin-core SMT LED technology	PLATINUM Elite twin-core SMT LED technology allows Pulsestar illuminators to deliver the highest possible pulse intensities for the maximum amount of light on scene.
Individual Illuminator Control System	Each LED panel on Adaptive Illumination™ models can be controlled and operated indivdually via dedicated channels from the PSU, offering greater flexibility for multi-lane installations, mobile applications etc.
VARIO Interchangeable lens system	Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.
Hot-spot Reduction Technology (HRT)	HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.
Active LED Life Control	An Advanced Cool Running™ system draws heat away from the LEDs, shielding the LED from abnormal stress, and allows Raytec LED products to deliver outstanding performance and consistency of illumination throughout the operational life of the illuminator. A long operational life also ensures the lowest maintenance costs, ideal for installations in difficult to reach areas.
Choice of Wavelengths	Lighting to suit a wide range of imaging requirements – Infra-Red 850nm or 940nm, White-Light, and bespoke colour options available.

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Technical Specifications

Illuminator

Model	Pulsestar i24	Pulsestar i32	Pulsestar i48	Pulsestar i72	Pulsestar i96
Lighting Drive Power (pulsed)*	220W	295W	440W	660W	880W
Consumption	22W	30W	44W	66W	88W
Number of LEDs	24	32	48	72	96
Input	Universal 100-230V AC (PSU included - Details below) 24V DC options available - Contact Raytec				
LED type	Platinum Elite twin-core SMT LEDs				
Illumination Angle	Standard pack includes 10°x10°, 20°x10° and 35°x10° lenses Other angles available on request				
Beam Shape	Elliptical with HRT (Hot-Spot Reduction Technology)				
Beam Angle System	VARIO Interchangeable Lens System				
Typical Pulse Width	2 ms				
Trigger Input	TTL - 3.3 - 24V DC				
12V DC Power Output	1A				
Control / Communication	Ethernet				
Wavelength	850nm (940nm options available)				
IP Rating	IP66				
Temperature Range	-20° to +50°C (-4 to 122°F)				
Colour	Black				
Weight	1.65kg (3.6lbs)	2.25kg (5 lbs)	4.5kg (9.9lbs)	6kg (13.2lbs)	2 x 4.5kg (9.9lbs)
Dimensions	135 x 180 x 68.2mm (5" x 7" x 2.6" approx.)	209 x 178 x 67mm (8" x 7" x 3" approx.)	279 x 223 x 68mm (11" x 9" x 3" approx.)	423 x 226 x 68mm (17" x 9" x 3" approx.)	2 off 279 x 223 x 68mm (11" x 9" x 3" approx.)
Bracketry	U bracket included	Adaptive Illumination mounting bracket included	Adaptive Illumination mounting bracket included	Adaptive Illumination mounting bracket included	2 x Adaptive Illumination mounting brackets included
Country of Manufacture	United Kingdom				

External Power Supply (included)

Input	Universal 100-230V AC auto-sensing				
Output	22W	30W	44W	66W	88W
Weight	1.7kg (3.75lbs)	1.7kg (3.75lbs)	2.0kg (4.4lbs)	2.3kg (5.1lbs)	2.3kg (5.1lbs)
Dimensions	181 x 287 x 107mm (8" x 12" x 4" approx.)				

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Product Codes

Part Codes	Description	Angles	Distances
PSTR-i96-HV	Pulsestar i96, 850nm, with 3 angle options included, 100-230V AC	10˚x10˚	50 -60m (164-197ft)
		20˚x10˚	30-34m (98-112ft)
		35˚x10˚	26-30m (85-98ft)
PSTR-i72-HV	Pulsestar i72, 850nm, with 3 angle options included, 100-230V AC	10˚x10˚	43-50m (141-164ft)
		20˚x10˚	26-29m (85-95ft)
		35˚x10˚	22-26m (72-85ft)
PSTR-i48-HV	Pulsestar i48, 850nm, with 3 angle options included, 100-230V AC	10˚x10˚	35-42m (115-138ft)
		20˚x10˚	21-24m (69-79ft)
		35˚x10˚	18-21m (59-69ft)
PSTR-i32-HV	Pulsestar i32, 850nm, with 3 angle options included, 100-230V AC	10˚x10˚	30-35m (98-115ft)
		20˚x10˚	17-20m (55-65ft)
		35˚x10˚	15-17m (50-55ft)
PSTR-i24-HV	Pulsestar i24, 850nm, with 3 angle options included, 100-230V AC	10˚x10˚	25-30m (82-98ft)
		20˚x10˚	15-17m (50-55ft)
		35˚x10˚	13-15m (43-50ft)

* Distances are camera and set-up dependant

940nm options and other angles are available - Contact Raytec

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