TRT LIGHTING
ROAD & TUNNEL SYSTEMS

OPTIO NANO

Designed specifically for the residential street lighting market and suitable for Dark Sky applications

MADE IN BRITAIN

www.trtlighting.co.uk/products/optio-nano

Discover more.

INNOVATE | INTEGRATE | ILLUMINATE

TRT are proud to introduce the latest innovation in our product range.

Designed with the real world in mind, the new Optio Nano lantern offers workable on-site solutions. Our designers were led by how this lantern and its features could be used in situ and what benefits it could bring.

Optio Nano has been created to provide for multiple stakeholders with easy fit shields to address light spill, and multiple CCTs to suit the requirements of ecologists and ecologically sensitive areas.

Discover more in each of our sections

DISCOVER MORE.

www.trtlighting.co.uk/products/optio-nano

Adding further choice into our Optio family of streetlights, the new Optio Nano, with a **replaceable light engine**, is **easily serviceable** and provides a **long term installation**.

This LED lantern has been developed to embrace technology and deliver maximum performance to P Class roads. Special consideration has been given to both capital cost and energy efficiency, the combination of this focus has resulted in the **most cost effective streetlight** from TRT to date.

Using the 'patent granted' MountSet mounting mechanism provides installers with the most universal mounting system available, catering for all types of new and existing column and bracket types. The highly successful PowerSet feature, available across all TRT products, also provides the Optio Nano with unrivalled flexibility in terms of onsite adjustability and adaption.

With a vast LED colour temperature range, a choice of optics and the ability to incorporate any method of control, the new Optio Nano caters for every residential road lighting scenario – a true one stop solution.

WHAT IS OPTIO NANO?

LIGHT SHIELD FIXING POINTS
(front & sides)

**RELIABLE AND DURABLE CLOSED
CELL SILICONE GASKETS**

POLYESTER POWDER COAT
- achieving 1000 hour salt spray resistance

**COLOURED OPTICAL
DISTRIBUTION IDENTIFIER**

REPLACEABLE LED MODULE
- exposed lens
- ventilation *(breather)* gland for
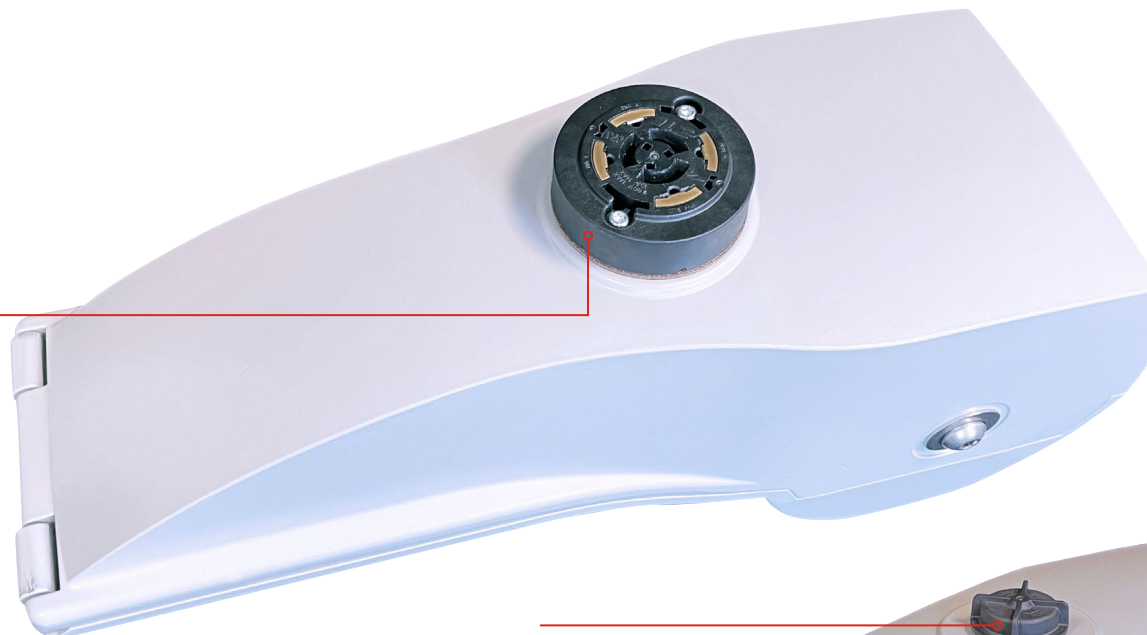 pressure equalisation *(optional)*

LIGHT SHIELD FIXING POINTS
(back & sides)

**HIGH QUALITY LM6
ALUMINIUM ALLOY BODY**

**UNIVERSAL MOUNTING UTILISING
MOUNTSET (PATENT GRANTED)**

PRODUCT FEATURES

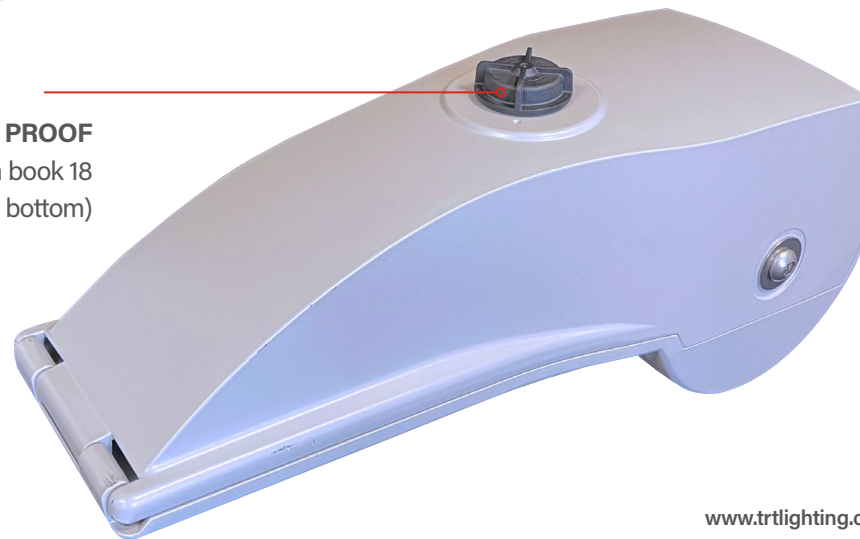www.trtlighting.co.uk/products/optio-nano

CMS READY;
simply connect with a
7 pin NEMA socket

Staying Connected

Easy upgrading of both gear
and LEDs and options for the
onsite power adjustment of
gear and LED output.

FUTURE PROOF
with the latest Zhaga book 18
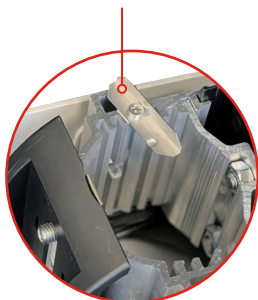4 pin socket (top & bottom)

PRODUCT FEATURES

www.trtlighting.co.uk/products/optio-nano

MountSet (patent granted)

Enables the Optio Nano to be mounted onto a wide array of column and bracket sizes without the need for additional reducers or inserts. The dual combination of a stainless steel grub screw and nut means that the lantern will be easily removable from the installation at the end of its useful life.
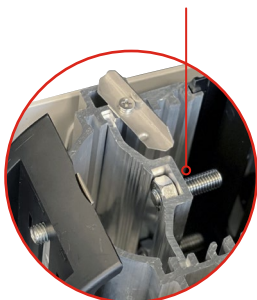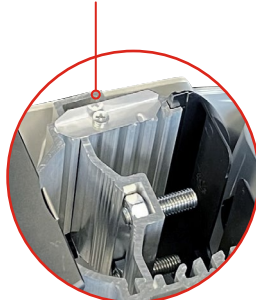
STEP 1
Twist open the locking plate

STEP 2
Move column clamp to desired position

STEP 3
Twist to close locking plate

5º increments for easy elevation and declination

Factory set 76mm

Loosen pivot locking screw to adjust mounting between pole top and side entry

PRODUCT FEATURES

www.trtlighting.co.uk/products/optio-nano

MountSet (patent granted)

Adjustment of column clamp being set to pole top position

View our video demonstration on mounting the lantern in post top position and side entry position.

VIDEO DEMONSTRATION
VIDEO DEMONSTRATION

PRODUCT FEATURES

PowerSet

An innovative power selection module that provides the end user with the flexibility to easily adjust power and lumen output whilst the luminaire is installed or in the depot. The PowerSet feature allows for reduced stock holding and each module is specifically designed for all luminaires provided by TRT Lighting.

Optio Nano PowerSet Settings

Standard	CLO
10W	10W
14W	14W
19W	19W
23W	22W
27W	26W
35W	34W
40W	39W

PRODUCT FEATURES

Summary & Benefits

Circular economy design – designed to be maintained - all key components can be easily replaced with maximum component re-use - the 'most circular economy ready' lantern we are aware of.

Future 'ready' – with the option of Zhaga book 18 (SR) sockets, top and bottom. Simple upgrade options with minimal future costs - with the addition of options for onsite power adjustment of gear and LED output.

Adjustability – allowing installations to be optimised and operatives to carry out varied lantern replacements if needed with lanterns they carry – especially with the variety of mounting options available.

Compact & lightweight – discrete and unobtrusive to the 'street-scape' - smaller in size to suit existing column and bracket infrastructure.

Clarity of communication – which lenses are in use can easily be checked by colour coding; this relates to the names of photometric files for ease of relating designs to installations.

Recyclable – the luminaire castings are manufactured from LM6 aluminium and are 1000 hours salt spray compliant. The Optio Nano has also been extensively mechanically and electrically tested to ensure that it is built to last.

Minimised stock holding – due to the lantern's MountSet flexibility, stock holding becomes more agile and practical which reduces the administration and deliveries required by ordering in per design.

Certified by DarkSky.org

TRT is committed to reducing obtrusive light and light trespass in order to protect the night sky from light pollution.

The preservation of the dark sky is critical not only for the well-being of people and wildlife, but also for scientific and astronomical purposes.

The **Optio Nano** has achieved International Dark-Sky Association approval. It is compliant when using a colour temperature of 3000K or below at 0º tilt as this results in no upward light.

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PRODUCT FEATURES

ELECTRICAL CHARACTERISTICS

TYPE	OPTIO NANO
System Power	5-40W
LED CCT	PC-Amber*, 2200K, 2700K, 3000K or 4000K
LED CRI	>70 (*>55)
Lumen Output	Up to 6136lm
Lumen Maintenance	Projected L90 after 100,000 hours
Drive Current	217-1050mA
Driver Output	Constant current output with AM dimming
Power Factor (Full Load/Half Load)	0.95/0.90
Operational Voltage	220-240VAC rms
Operating Frequency	50/60Hz
Inrush Current (Apk/50%-µS)	26A/180µS
Running Current (max)	0.171A max
Surge Protection (COM/DIF)	10kV/6kV
Additional Surge Protection (on request)	10kV/10kA
Lighting Controls Options	NEMA 3, 7, Miniature photocell, Zhaga book 18 (SR) socket (top & bottom), PND and CMS compatible
Dimming Protocols	DALI-2 & D4i certified control gear for use with CMS and external sensors/devices

TECHNICAL SPECIFICATIONS

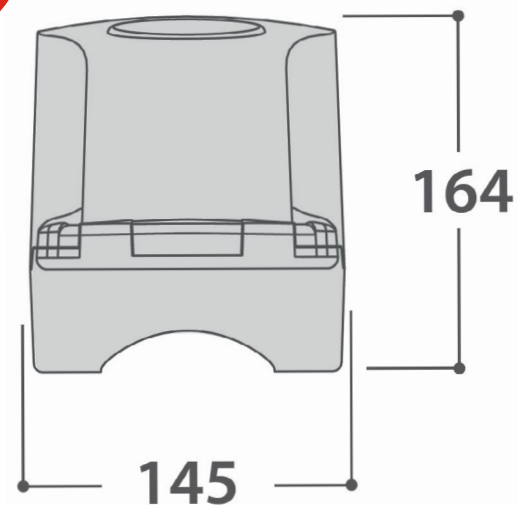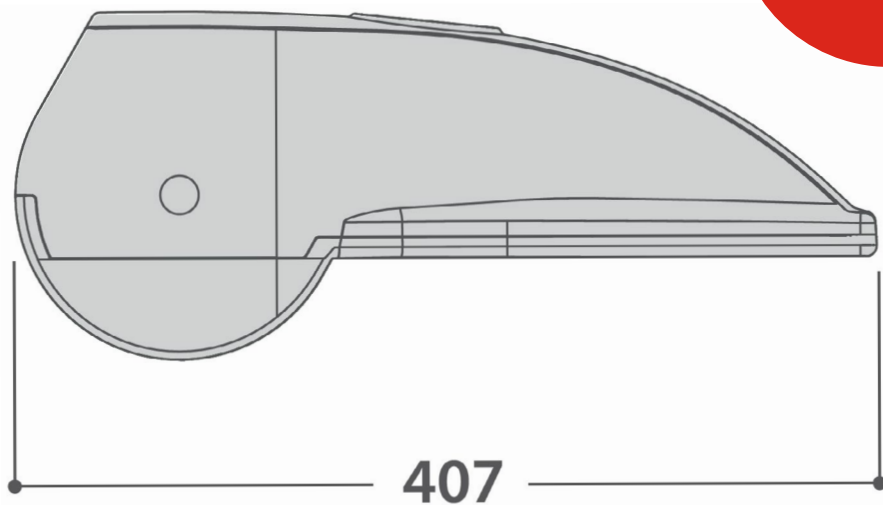| MECHANICAL CHARACTERISTICS	
TYPE	OPTIO NANO
Housing Material	High quality high pressure die cast LM6 aluminium components
Housing Finish	Chromate free pre-treatment, polyester powder coat, light grey (RAL9006), black (RAL9005), dark grey (RAL7022)
Lens Material	PMMA
Ingress Protection Rating	IP66
Weight	4kg
Wind Area	0.046m^2
Impact Resistance Rating	IK08
Mounting Methods	Post top 60mm or 76mm Side entry 34mm, 42mm, 60mm or 76mm
Mounting Inclination	-10°, -5°, 0°, 5°, 10°

SHIELD OPTIONS	
Universal Front/Rear	83SHD72365
Side	83SHD72366

TECHNICAL SPECIFICATIONS

PHOTOMETRIC CENTRE: 225MM (TO CENTRE OF PCB)

DIMENSIONS

407

164

145

TECHNICAL SPECIFICATIONS

Step 1: Select Product Variant	Step 2: Generation	Step 3: Select Power Level	Step 4: Select Distribution	Step 5: Select CCT	Step 6: Select Paint Colour	Step 7: Communication Protocol[1]	Step 8: Select Mounting	Step 9: Controls[2]	Step 10: Flying lead	Step 10: Breather Gland	Step 12: Part Night[3]	Step 13: Part Night step 2[4]	Step 14: Part Night step 3	Step 15: Part Night step 4	Step 16: Override[5]
OPN12 Standard Optio Nano 12 LED		**5 up to 40** (in 1 watt steps)	**GA1** = General Area 1 **GA2** = General Area 2				**PT60** = Post Top 60mm	**M10** = 35/18 Minicell	**4A1** = 4m of 3-Core Arctic 1.5mm² Cable						
		10 14 19 23 27 35 40	**GA3** = General Area 3 **GR1** = General Road 1 **GR2** = General Road 2 **GR3** = General Road 3 **GR4** = General Road 4	**4K** = 4000K **3K** = 3000K **27K** = 2700K **22K** = 2200K **PCA** = PC-Amber	**LG** = Light Grey **DG** = Dark Grey **B** = Black	**D** = DALI driver **N** = Non-DALI driver **S** = D4i driver	**PT76** = Post Top 76mm **SE34** = Side Entry 34mm **SE42** = Side Entry 42mm **SE60** = Side Entry 60mm **SE76** = Side Entry 76mm	**N3** = 3 Pin NEMA Socket **N7** = 7 Pin NEMA Socket **ZT** = Zhaga Book 18 Socket, (Top) with Cap **ZB** = Zhaga Book 18 Socket, (Bottom) with Cap	**5A1** = 5m of 3-Core Arctic 1.5mm² Cable **6A1** = 6m of 3-Core Arctic 1.5mm² Cable **7A1** = 7m of 3-Core Arctic 1.5mm² Cable **8A1** = 8m of 3-Core Arctic 1.5mm² Cable **9A1** = 9m of 3-Core Arctic 1.5mm² Cable **10A1** = 10m of 3-Core Arctic 1.5mm² Cable **11A1** = 11m of 3-Core Arctic 1.5mm² Cable	**GD** = Gland with integrated breather valve	**PN** = Factory set part night dimming	**752022** = eg: 75% from 20:00 until 22:00	**5000** = eg: In addition to Part Night step 2, dim to 50% until 00:00	**7506** = eg: In addition to Part Night step 3, dim to 75% until 06:00	**OV1** = Dim On **OV2** = Override
OPN12P Optio Nano 12 LED with PowerSet	**1** = 1st Release														
OPN12C Optio Nano 12 LED with Constant Light Output (CLO)		**5 up to 39** (in 1 watt steps)	**GR5** = General Road 5 **GR7** = General Road 7												
OPN12PC Optio Nano 12 LED with PowerSet & Constant Light Output (CLO)		**10 14 19 22 26 34 39**													

EXAMPLE	OPN12	1	40	GR1	4K	LG	D	PT76	N7	7A1	GD

1. DALI driver can be combined with M10, N3, N7 | Non-DALI driver can be combined with M10, N3 | D4i driver must be combined with ZT or ZB
2. N7 only available with DALI driver
3. Part Night available in up to 3 customisable settings, listed as Step 2 or Step 2+3 or Step 2+3+4 (Step 1 & 5 are fixed at 100% output)
4. Part Night is limited to Step 2 if selected with a non-DALI driver
5. Override available with M10, N3 or N7 only

ORDERING

TRTLIGHTING
ROAD & TUNNEL SYSTEMS

For more information

📞 **+44 (0) 1527 521 162**

www.trtlighting.co.uk

TRT Lighting evolved from Thorlux Lighting in 2012 as a specialist division of the FW Thorpe Group with a core focus on developing innovative lighting products for streets, roads and tunnels using only LED technology.

Culture of transparency – we provide clear, honest information designed to be useful so clients have a clear understanding of what can be expected from the product and the company.

Sustainability – we are a CO_2 neutral supplier with strong roots in British manufacturing dating back to 1936.

Locally supported – we manufacture our luminaires in Redditch, Worcestershire and are proud members of the official Made in Britain campaign and their Green Growth programme.

WORKING WITH TRT

MADE IN BRITAIN   PREMIER ILP CORPORATE MEMBER   HEA Highway Electrical Association   LIGHTING INDUSTRY ASSOCIATION   MADE IN BRITAIN GREEN GROWTH PROGRAMME   CARBON NEUTRAL SINCE 2012

INNOVATE | INTEGRATE | ILLUMINATE