

INTRODUCING TERRALED - A NEW ERA IN ROAD LIGHTING





WHO ARE ORANGETEK?

- Established Worldwide Company
- 1 of 3 Approved providers of LED traffic Lights in Australia (partnered with Tyco)

OrangeTeK Ltd. is a worldwide company established in Australia and New Zealand in 2004 and the UK in 2008. We specialise in exterior lighting products that make use of LED lighting technology. We built up our reputation as providers of LED based Traffic Lights, and, in conjunction with Tyco, are 1 of 3 approved providers for the Australian Roads Traffic Authority. We have also recently secured a major contract to supply 50% of LED traffic lights to Singapore for the next 5 years.

WHY ARE ORANGETEK IN THE UK?

- Carbon Reduction Commitment has created a momentum to reduce Co2 emissions.
- OrangeTeK has focused it's expertise in LED to produce an affordable streetlight that can significantly reduce energy consumption without sacrificing performance.

The UK has typically been a leader within the field of road lighting, setting the standards for other countries around the world to follow. With the advent of global warming, and directives like the Carbon Reduction Commitment, innovations to reduce energy consumption without compromising performance have become extremely important within the UK market. LED is an ideal technology in this scenario as it has the potential to reduce power consumption by around 50%, with corresponding reductions in Co2. Realising the pressures that Councils and large businesses are under to reduce their tax burden by lowering their energy consumption, we set about putting our vast experience with LED towards designing a range of LED Streetlights that was tailor made for the UK.



DESIGNED FOR THE UK – THE ORANGETEK TERRALED ROAD LIGHT

- High Performance
- Affordable
- Up to 50% less energy compared to existing technology

The result of extensive research and feedback from prominent lighting professionals in the UK, OrangeTeK is proud to present to you our TERRALED Affordable Range of Modular LED based Luminaires. Engineered to meet or exceed British Standards, this new range has been designed to bring LED streetlighting into the mainstream.

MODULAR DESIGN FOR EASY UPGRADEABILITY AND HIGH OUTPUTS

Our innovative modular design allows one luminaire to be upgraded as the needs of the road change. Modules are available to allow light outputs as low as 24 watt, to a powerful 180 watt. In addition, in the unlikely event of a failure, modules are easily replaceable as needed.



LOW TOTAL COST OF OWNERSHIP

Our TERRALED luminaires are feature rich at an affordable price. With their long life spans and relatively low initial costs, TERRALED luminaires can offer significant cost savings over traditional streetlighting technologies.

Scenario One - Comparison Between Terra 36 and SON-T 50W

- Energy saving of 93 kW-h which equates to 38%
- Carbon emission reduction of 40 lb per annum
- Payback time 3.87 years

Scenario Two - Comparison Between Terra 48 and SON-T 70W

- Energy saving of 125 kW-h which equates to 39%
- Carbon emission reduction of 54 lb per annum
- Payback time 3.78 years

For details please refer to Excel files "TERRALED Payback Calculation".

TECHNICAL SPECIFICATIONS

Model Number	Number of LEDs	Module Quantity	Initial Luminaire Flux (lumens)	Power Consumption (including power supply losses)	Weight (Kg)	Windage Area (m ²)	Operating Temp. (Celsius)
TERRALED 24	24	2	2188	27W	8	0.054	Between -40 °C and +50 °C
TERRALED 36	36	2	3282	37W	8	0.054	
TERRALED 48	48	2	4377	49W	8	0.054	
TERRALED 60	60	2	5471	57W	8	0.054	
TERRALED 72	72	4	6565	74W	10	0.064	
TERRALED 96	96	4	8754	98W	10	0.064	
TERRALED 120	120	4	10943	110W	10	0.064	
TERRALED 144	144	6	13131	147W	13	0.074	
TERRALED 180	180	6	16414	184W	13	0.074	

*All measurements taken at ambient temperature of 25°C



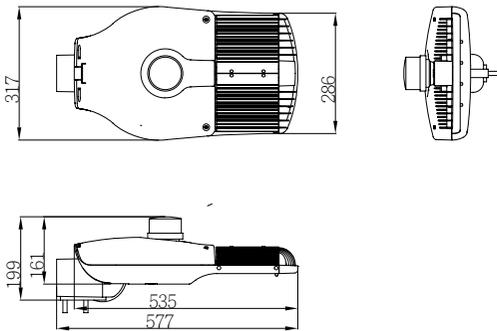
(2 Module)



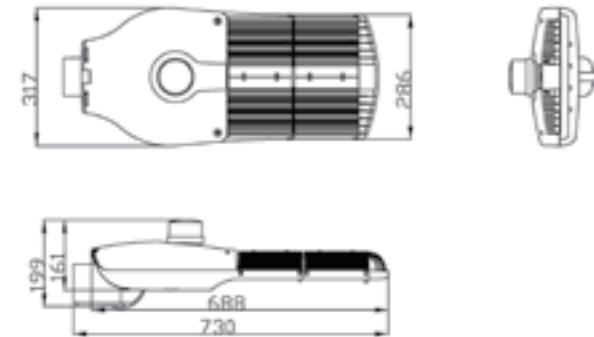
(4 Module)

DIMENSIONS

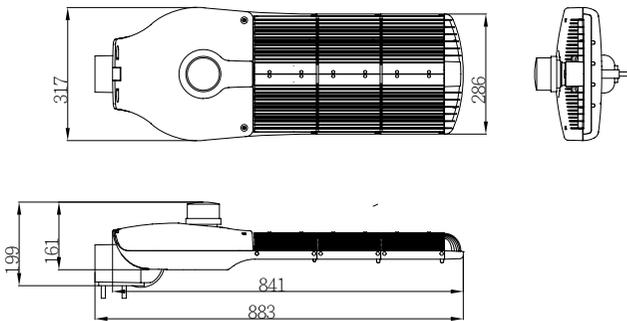
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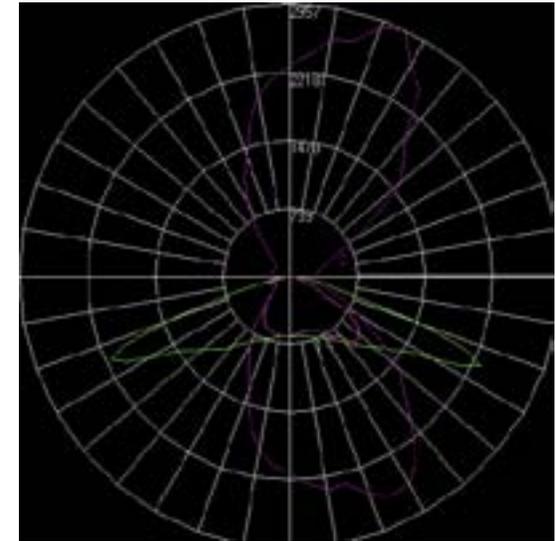
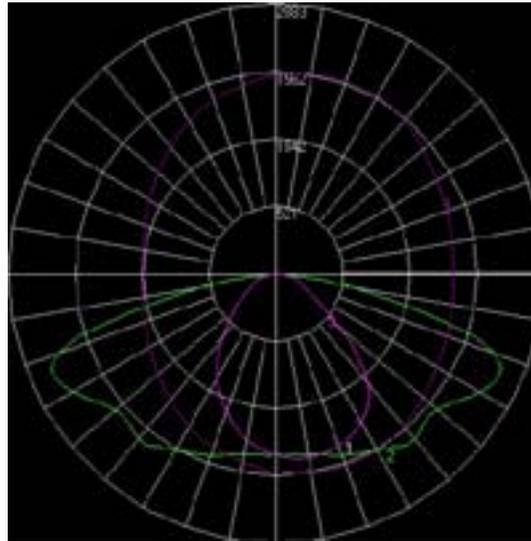
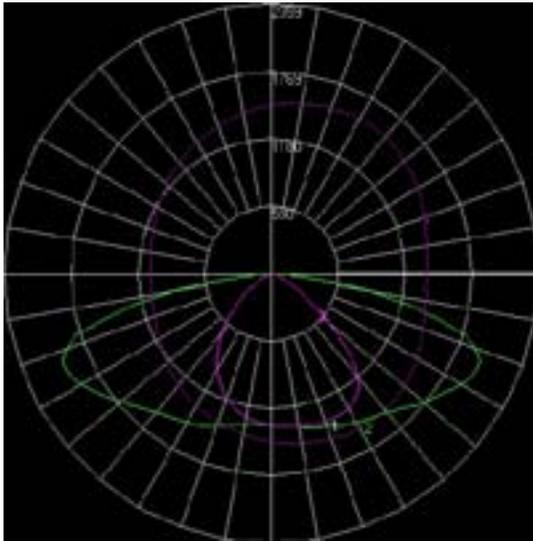


6 Module



(6 Module)

OPTICAL PERFORMANCE



(Terra LED distribution patterns)

- Colour temperature: 4800K.
- Colour rendering index: 70.
- High Quality 100 Lumen/Watt Nichia LEDs.
- Highly uniform light distribution. Full cut off.
- Each LED module is fitted with identical optical lenses to provide optimal efficiency and desired light distribution.
- 3 Different lens designs to suit different road lighting challenges.
- Photometric files are available on request. Available in ies. and cie. formats.



MECHANICAL AND PHYSICAL FEATURES

Materials and Methods of Construction

- The TERRALED luminaire housing is constructed from Die-cast aluminium alloy. The remaining surface material is made of non-rust material such as stainless steel, extruded aluminium alloy and UV stabilised polycarbonate.
- The TERRALED luminaire construction consists of a power supply compartment and optical modules.
- The metallic surfaces of the housing are thoroughly cleaned, etched, aluminum chromated and dried before the application of a RAL 9005 black polyester powder coating at least 50 µm thick. Other RAL colours are also available on request.
- The LEDs of TERRALED are mounted and soldered onto a printed circuit board. The printed circuit board is installed in the optical module and sealed with clear UV stabilized polycarbonate lens to a degree of protection of IP66.



Installation/Mounting

- Mounting: post top or side entry through the use of two M8 locking screws.
- Post top: 60-76mm.
- Side entry: 32-60mm.
- Tilting mechanism enable fast adjustment on tilt angles from -10 to +10 degrees in 5 degree step.

Accessing Power Compartment

- The power compartment is capable of being hinged open and the lid is automatically held open with a positive latching system. It is also possible to replace the driver without disturbing the luminaire mountings.

Thermal Management

- TERRALED incorporate Extruded Aluminium Heatsinks, which are proven to work more efficiently than other die-cast equivalents. In addition, our luminaires run at a relatively low 300mA driving current. This combination keeps junction temperatures low and ensures our luminaires will easily maintain L80 Lumen depreciation for at least 50,000 hours.
- Air Ventilation Valve built within power compartment to ensure sufficient airflow to keep drivers cool.



ELECTRICAL DATA

- All electrical components are appropriately de-rated with regard to applicable duty cycles to give a minimum 84 000 hours life expectancy.
- The TERRALED luminaires are rated for operation at voltages of 200V-240V rms 50Hz-60Hz.
- The luminaire will not be damaged by any supply in the ranges of 180V – 264V rms and 47 – 63 Hz.
- Internal surge protection to 6KV
- The driver unit is individually sealed to a protection of IP66.
- The TERRALED luminaire's power factor is greater than 0.92.
- Class I electrical or Class II versions.

LIGHTING CONTROL

- TERRALED luminaires come with NEMA photocells as standard . The use of photocell sensors on outdoor lighting will conserve equipment and energy resources.
- Dimming options are also available.

QUALITY SYSTEM AND CONSTRUCTION STANDARDS

- Designed and manufactured to comply with EN 60598-2-3 Road Lighting
- TERRALED luminaire is a RoHS, WEEE compliant product.
- OrangeTeK ODM factory implements and maintains a Quality Management System in accordance with ISO 9001:2008.
- OrangeTeK ODM factory implements and maintains a Environmental Management System in accordance with ISO 14001:2004.

WARRANTY

Each unit is guaranteed for 20 years from the date of purchase. In the unlikely event of a failure, we will replace the entire unit.

Due to the continuous research & development we undertake on our products, we reserve the right to alter the specifications without notice.

Contact Details

For more information on our TERRALED luminaires, please contact:

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