

## LRT Signalling for the Control of Tramcars

### Product Features

- Designed to meet the latest department of Transport Specification TR2514A Light Signals For The Control of Tramcar
- Retro fit module - Simple retro fit procedure into existing generic tungsten filament units
- Complete housed module ready to install into new or existing systems
- Provides full lamp monitoring Single circuit board design
- On board programming for enhancements / updates
- The CheckPoint™ optic is a result of continuous development to provide state of the art solutions into the field of traffic control and comes in a range of configurations.

The optic benefits from the latest range of micro controllers providing a flexible and reliable programming platform. Each optical subsystem has been designed to provide enhanced aesthetics and optical performance. Particular attention to detail was paid to the design of the retro fit module in order to provide a speedy installation in a potentially hostile environment.

### Reliability

Each LED Checkpoint™ signal head is designed using the latest microprocessor control to provide optimal reliability. LEC technology utilised in the LED Checkpoint™ has a MTBF of >60,000 hours driven at 300mA; the LED's are actually driven at 150mA providing for a life span of well in excess of this. The 'Fault' output relay has a MTBF of 10,000,000 operations. Custom designed and built LED Checkpoint™ are available on request

### Maintainability

The LED Checkpoint™ signal head is designed for ease of mounting/removal via two simple 'L' brackets. The entire electronic/optical assembly is constructed on one single PCB secured by 4xM5 screws. Replacement of individual electronic/optical assembly is completed by the removal of one 8 way connector and 4xM5 screws; a task that takes less than five minutes. Replacement of the entire optical door assembly requires the removal of one 8 way connector and two hinge pins a task that takes less than five minutes



### Safety

The LED Checkpoint™ software controlling the optic has an integral 'watchdog' routine which continually monitors the execution of the software code; any malfunctions cause the processor to shut down with all outputs defaulted to 'fail safe' digital inputs

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## Technical specification

### SUPPLY VOLTAGE

240 V<sub>AC</sub> ± 20% @ < 300 mA

### OPERATING FREQUENCY

50 Hz

### WIRING

Complies to BS:7671

### OPERATING TEMPERATURE RANGE:

-15 °C to +60 °C.

### DIAGNOSTICS:

RS232 engineers terminal  
LED indicator mimics

### OPTICAL LIFE EXPECTANCY

>60,000 hours

### SIGNAL CHROMATICITY

The colour of light emitted from each light emitting element for both the normal and dimmed conditions meet the requirements of BS: 1376 Class C.

### CONTRAST RATIO

>18:1

### DIMMING

Programmable between ¼ and ½ full intensity

### UTC

Reply bit reports any LED (see comments above) and power failure

### LAMP MONITORING

Compatible with most currently available traffic signal controllers

### PHYSICAL

The LRT head is approximately 420x42x250 mm deep and a weight of 6.5 kg complete with brackets.

The PPI head is approximately 420x42x250 mm deep and a weight of 5Kg complete with brackets



Due to continuous efforts to develop products that are responsive to customer needs, the above specifications are subject to change

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