



#### product / specifications

Our customers asked us for a lighting product that was unique. We gave them the Defender Uplight.

After extensive development and testing Birchwood delivers a product that stands up to the rigours of the toughest applications in the harshest environments - the Construction, Automotive and Defence Industries in particular.

Uplight is undoubtedly the fluorescent light of the future. Its groundbreaking component design overcomes all of the storage, distribution, handling, stability and performance problems associated with conventional lighting. Indeed, Uplight defeats all of these problems and offers so much more...

## dual voltage technology

In terms of Electronic Control Gear (ECG), the high frequency dual voltage electronic ballast has a certified voltage range of 120 to 277 volts, although the unit will handle voltage drop down to 77 volts. It also allows Uplight to accommodate any fluctuation in voltage when either run in series or with a poorly calibrated generator. This pioneering technology also facilitates:

- Safety shutdown at end of lamp life
- Flicker-free controlled warm start
- Digitally controlled fixed pre-heat time across all ambient temperatures
- Automatic restart after lamp change
- Simple plug and power outlet change to alternate between a 110-volt and a 220-volt unit (no internal wiring required). For the first time, users can operate the same lighting unit in domestic and industrial/ commercial applications – one light fits all.

#### low wattage

Maximum output and minimum input is ensured using 18 watt and 36 watt energy efficient Phillips T8 triphosphor daylight tubes. Combined with the high frequency ECG this modern arrangement can save over a third in energy consumption and significantly increase the service life of lamps versus traditional halophosphate lamps that use Conventional Control Gear (CCG).

Consumption is only 18 watts on the 2 ft unit and 36 watts on the 4 ft unit, but both emit a higher light output than any traditional halophosphate fluorescent light.

#### extended lamp life

Normal lamp life of a T8 triphosphor tube is 15,000 hours. However, the high-frequency ECG built into Uplight extends this average life by a further 5,000 hours to 20,000 hours, resulting in dramatic immediate and long-term cost-savings. This more than makes up for the higher initial cost per lamp compared to conventional T12 and T8 halophosphate tubes. Refer to table 1 below for comparisons:

Table 1: Fewer lamp replacements with triphosphor T8 tubes								
Tube & control gear	Average lamp life (hours)	Lumen levels in application after lamp failures and reduction in light output over lifetime						
		3,000 hours/ 1 year	6,000 hours/ 2 years	9,000 hours/ 3 years	12,000 hours/ 4 years	15,000 hours/ 5 years		
T12 + CCG*	9,000	86%	76%	34%	00%	00%		
T8 Halophosphate + CCG	11,000	86%	78%	63%	21%	00%		
T8 Triphosphor + CCG	15,000	98%	95%	88%	76%	44%		
T8 Triphosphor + ECG*	20,000	98%	95%	94%	88%	76%		
*CCG: Conventional Control Gear, **ECG: Electronic Control Gear								
Source: OSRAM & PHILLIPS								

## more intense and natural light source

Uplight uses a specially coloured triphosphor 'cool daylight' tube that provides a totally natural light in which to work – it's a clean, cool, crisp white light that gives a higher and better quality light output than conventional tubes.

At the half-life stage the drop in luminous flux of conventional T12 and T8 halophosphate tubes is around 20% versus only 10% in Uplight's T8 triphosphor tube. More dramatically at the end of its lifespan the T8 triphosphor tube will still have 76% of its original luminous flux whereas the conventional tubes will have failed completely. This means that the number of tube changes can be halved at least.

Specifically, a basic 4ft 40 watt T12 tube offers an initial light output of 3,000 lumens, whereas the 4ft T8 36 watt triphosphor tube used in Uplight gives 17% more light at 3,500 lumens. Thus, the user has the ability to achieve the same lighting levels but with fewer Uplights than with traditional lights.

## anti-shock tube protection

To protect the tube from damage Uplight incorporates an 'anti-shock tube protection system'.

#### quick-change tube replacement system

In the event of damage or tube failure, tubes can be replaced quickly and simply. Remove the upper end cap, replace the tube, and then refasten. No tools needed!!!

#### detachable reflector

In its standard form Uplight is fitted with an aluminium reflector to give a 180° light spread at 3500 lumens. By removing the reflector 360° flooded luminosity is achievable.

#### robust polycarbonate light diffuser

The diffuser protects the tube from the rigours of the toughest applications. It can even take a hammer blow without incurring subsequent damage!!!

#### indoor and outdoor compatibility

Rated to IP44 specification, Uplight is suitable for use both indoors and out without any concern for safety. This enables it to cover a vast array of applications construction sites, railways, event hire, garden patios and pathways, outdoor leisure, emergency lighting in hospitals and offices, and domestic DIY.

#### testing

Tested independently by SGS (UK) Ltd as a 'rough service' luminaire, Uplight meets and exceeds all relevant European and US safety regulations. Copy certificates are available upon request.

#### low temperature operation

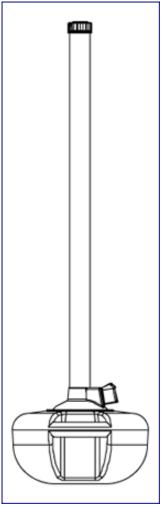
Low wattage means low heat. Uplight is tepid to touch even in continuous use, eliminating the risk of burning for both the user and the public at large.

## multiple linking capability

Thanks to its singular power outlet up to 69 4ft-36W Uplight units can be placed in series from one 2.5kVa generator with a 5-metre spacing without any voltage drop between them. And from a standard 13-amp UK household supply 20 such Uplight units can be operated.

# stable polypropylene base

The highly visible yellow spherical base is self-righting up to 45° from its freestanding upright position. It takes a hard knock and pops back up for





more!!!

#### easy to store and transport

A detachable base and light diffuser facilitate separate storage and transportation options if required. This means that large numbers of units can be stockpiled and moved with ease.

#### environmental compliance

Uplight's triphosphor tubes are low energy and contain less mercury than traditional halophosphate tubes, making them compliant to the new European Directives on energy consumption and toxic waste reductions.

#### extended temperature range

Uplight is able to run in temperatures that span -25°C to 50°C, covering all but the most severe weather conditions across the world.

#### hassle-free guarantee

A 1 year guarantee comes as standard with Uplight. For full terms and conditions please refer to the 'Uplight Operation and safety Guide' that is supplied with each product.

#### patent protection

A significant investment has been made in patent protection, ensuring that the unique Uplight design is safeguarded throughout the world.

Needless to say, Uplight is built super tough. Its' unique design eliminates all of the problems that conventional fluorescent lighting has suffered. It's quite unlike any other light that has gone before it.

A hassle-free bright future is now a reality for our customers.

#### **UPLIGHT - TAKES KNOCKS OTHERS CAN'T**

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