

T5 lamp concept

MOTIVATION

With its slimmer profile and high energy efficiency the T5 Lamp brings many benefits to lighting design and ultimately to the customer.

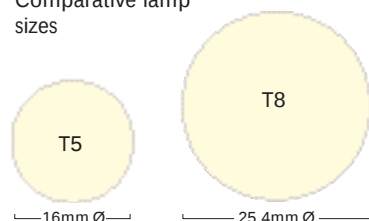


With a diameter of 16mm, T5 is 40% smaller than existing T8 lamps. It is also 50mm shorter than its predecessor, making it more suitable for use in modular ceilings and continuous lighting applications.

T5 lighting systems offer a different approach to luminaire design. They are especially suited for general lighting purposes, for example in offices and retail environments, where compact and more architectural luminaire designs are appropriate.

The development of the T5 lamp is the most significant step forward in energy efficiency since the introduction of high frequency gear. On average, a luminaire arrangement using a T5 lamp will deliver a 40% energy saving when compared to a similar arrangement using T8 lamps.

Comparative lamp sizes



BT Atlantic Quay
Glasgow

ENERGY EFFICIENCY

Vivant™, Javelin and Spear make maximum use of the energy efficiency of the T5 lamp with up to 76% downward light output.

The efficiency of Vivant™, Javelin and Spear means that compared to a T8 scheme, less lamps are required to achieve the same illuminance level. For reasons of economy and ecological issues, high frequency gear is used as standard throughout the range.

Vivant™, Javelin and Spear use louvres made from high quality specular material as standard, reducing contrast and resulting in excellent brightness control. This makes them especially suitable for office environments with high VDT use.

Command 3

To further increase the energy efficiency of the T5 range, all luminaires are fully compatible with Whitecroft Lighting's Command 3 intelligent luminaire control system providing absence and presence detection and daylight sensing.

To test our new high technology, T5 range we took Javelin in a typical open plan area and conducted a comparison with a T8 solution.

- Area: 14.4 x 14.4m
- Ceiling height: 2.6m
- Working plane: 0.8m
- Reflectances: 70/50/20
- Maintained illuminance of 450 - 500 lux average

Calculations revealed the following:

1. T8 Halophosphor 4x18W

Luminaires required: 42

Spacing: 2.0 x 1.8m

Energy consumed:

Switchstart 3.9KW

High frequency 3.1KW

2. T8 Triphosphor 4x18W

Luminaires required: 36

Spacing: 2.4 x 2.4m

Energy consumed:

Switchstart 3.3KW

High frequency 2.6KW

3. T5 Triphosphor 3x14W

Luminaires required: 36

Spacing: 2.4 x 2.4m

Energy consumed:

High frequency 1.8KW

- **50% energy saving over Halophosphor switchstart**
- **30% energy saving over Triphosphor high frequency**

Performance comparison

