

Expert is Ireland's largest electrical retailer with 69 stores nationwide.

The chosen lighting system is the QL4 QuarterLites from Expedio Lighting Ltd. They are ideally suited for large sky signs that are difficult and expensive to maintain.

The 1500 mm diameter signs have 12 QL4 lights giving a light output of 4,800 Lm. The 1800's have 21 lights and produces 8,400 Lm

QuarterLites use very high brightness LEDs and reduce energy consumption by 65% - 85% in all signs. They have a longer lifespan than fluorescent tubes and do not require maintenance for over 50,000 hours.

Energy saving 80%



Expert 1500 mm diameter sky sign using 12 QL4 QuarterLites, as shown on the overlay above.

QL4 Specification:



| | |
|----------------|--------------------|
| Light output | 400 - 428 Lm |
| Half life | 50,000 + hours |
| Input current | 350mA, 4-12v, 4w |
| Wave guides | Silver ABS plastic |
| Heat Sink | Aluminium |
| Op/temperature | Ambient + 6° C |
| Size | 80 x 80 x 24 mm |
| Weight | 75 g |
| Guarantee | 2 years |

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| Fluorescent Size | Qty | Item | Wh Unit | Wh Total | 12/365 kWh | Energy 5Y | CO2 Kgs | Carbon Kgs | |
|---------------------------|-----|------------|---------|----------|---------------|---------------|---------------|---------------|---------------|
| 1800 dia | 2 | 36" (900) | 30 | 60 | 263 | 116.95 | | | |
| | 4 | 60" (1500) | 58 | 232 | 1,016 | 452.19 | | | |
| | 1 | 72" (1800) | 70 | 70 | 307 | 136.44 | | | |
| | 6 | Ballast | 9 | 54 | 237 | 105.25 | | | |
| Total kWh per year | | | | | 1,822 | 810.83 | | | |
| | | | | | New Tubes | 75.55 | | | |
| | | | | | Tube Disposal | 78.95 | | | |
| | | | | | Total | 965.33 | 4,892 | 1,335 | |
| QuarterLite Size | Qty | Item | Wh Unit | Wh Total | 12/365 kWh | Total 5Y | CO2 Kgs | Carbon Kgs | |
| 1800 dia | 3 | QL-Kit 5 | 20 | 60 | 263 | 116.95 | | | |
| | 1 | QL-Kit 6 | 24 | 24 | 105 | 46.78 | | | |
| Total kWh per year | | | | | 368 | 163.72 | 988 | 270 | |
| | | | | | Saving | 1,454 | 801.60 | 3,904 | 1,065 |
| | | | | | | 79.81% | 83.04% | 79.81% | 79.81% |

Key:

Wh (Unit) = Watts of electricity used per hour by each tube or QL4

Wh (Total) = Qty x Wh (unit)

12/365* (kWh) = Wh (total) x 12 hours x 365 days / 1000 = kWh per year

Energy (cost 5/Y) = kWh x cost of energy** of 5 years.

CO2 = The amount of CO2 (Kgs) produced as a result of generating the Total kWh per year

Carbon = the equivalent Carbon (Kgs) produced from the Total kWh per year

Total kWh per year = Total energy use in 1 year for each lighting system

New Tubes / Disposal = cost of replacing and disposing of fluorescent tubes over 5 years

Saving = difference between the two lighting systems in kWh, Energy costs, CO2 and Carbon

(Note: This excludes the savings in maintenance)

*Over 11 years maintenance free.