Victor
Lighting

Hazardous Area Lighting

Quick Reference Guide

Introduction

Founded in 1929, Victor has over 80 years of experience in manufacturing hazardous area equipment to the highest standards of quality and reliability.

The company is now a division of Hubbell Limited and based in Glasgow, Scotland.

Victor has developed a range of unique technologies that are used to create innovative lighting solutions. These are installed and relied upon in the most arduous environments throughout the world. Our extensive product range will fulfil all lighting requirements in hazardous or industrial environments and in both onshore and offshore installations.

The Victor Lighting hazardous area range is certified to comply with the latest ATEX directives. In addition a number of products are also certified under the IECEx scheme and to Russian and Chinese standards.

This short form catalogue features a brief introduction to our world class range of light fittings that are designed in accordance with IEC electrical standards. Victor Lighting is a quality company, in addition to ISO 2001:2008 certification, the company has also implemented the requirements of the WEEE & RoHS directives.

LiteGuide™ Lighting Design Software

Victor Lighting has created a design program to assist in the development of your installation's lighting design. This easy to use package allows new designs to be developed rapidly, removing the need to use time consuming and complicated photometric tables.
This software is available free of charge, no licence is required to run LiteGuide™.

LiteGuide allows you to:

- Design lighting layouts from the very basic to the extremely complex
- Account for shadowing and effects of reflection
- Incorporate interior and exterior components in a single scheme
- Use shortcut icons to:
  - Turn individual fitings on/off or assess in emergency mode
  - Move, change or delete luminaires easily
  - Re-size icons to suit the scale of your project
- Use scrolling wheel mouse to zoom in/out
- Import and export to CAD packages (DXF format)
- Print to a pdf or hardcopy (A0 to A4 sizes)

LiteGuide also includes quality estimators for interior, exterior and aisle lighting schemes to allow for quick and easy budgeting.

To obtain a copy of LiteGuide, visit the Victor Lighting website **www.victor-lighting.com**, here you can regiser and download the latest version of the software.

Ex Designations Explained

IP Code
The IP rating given states the degree of protection with two digits.

First Digit
Contact with foreign bodies

- **0** = No Protection
- **1** = Objects larger than 50mm
- **2** = Objects larger than 12.5mm
- **3** = Objects larger than 2.5mm
- **4** = Objects larger than 1mm
- **5** = Protected against dust (No harmful deposits)
- **6** = Totally protected against dust

Second Digit
Protection from water

- **0** = No Protection
- **1** = Vertically falling drops
- **2** = Sprays up to 15° from vertical
- **3** = Sprays up to 60° from vertical
- **4** = Sprays from all directions
- **5** = Low pressure jets
- **6** = High pressure jets
- **7** = Temporary immersion
- **8** = Continuous immersion

ATEX CODING

II 2GD	Ex	de	IIC	T4	Gb	IP65

Device Group

- **I** = Mining
- **II** = All other areas

Category

- **1** = Can be used in Zones 0 or 20
- **2** = Can be used in Zones 1 or 21
- **3** = Can be used in Zones 2 or 22

Atmosphere

- **G** = Gas
- **D** = Dust

Ex = Compliance with Ex Standards

Electrical Protection Concepts

Gas	Dust	Concept	Zone G	Zone D
d		Flameproof	1	
	ta tb tc	Enclosure		20 21 22
a o e		Powder Filling Oil Filled Increased Safety	1 1 1	
ia ib ic	ia ib ic	Intrinsic Safety	0 1 2	20 21 22
nA nL nR nC		Non-Sparking Energy Limited Restricted Breathing Enclosed Break	2 2 2 2	
ma mb mc	ma mb mc	Encapsulation	0 1 2	20 21 22
pxb pyb pzb	P	Pressurised	1 1 2	21/22 21/22 21/22

Equipment Protection Level

Code	Zone
Ga	0
Gb	1
Gc	2
Da	20
Db	21
Dc	22

Temperature Classes
Maximum surface temperature

- **T1** = 450°C
- **T2** = 300°C
- **T3** = 200°C
- **T4** = 135°C
- **T5** = 100°C
- **T6** = 85°C

Gas Group
Data only for devices used in areas rendered potentially explosive by gas

- **IIA** = Methane, propane, petrol & other industrial gases
- **IIB** = Ethylene, coke oven gas & other industrial gases
- **IIC** = Hydrogen, acetylene & carbon disurphide

Ex	tb	IIIC	Txxx°C	Db	IP65

Dust Group

- **IIIA** = Combustible Flyings
- **IIIB** = Non-Conductive Dust
- **IIIC** = Conductive Dust

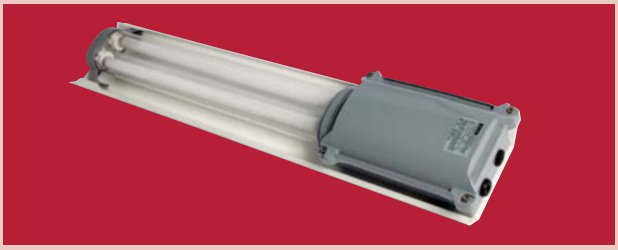
Maximum External Surface Temperature

For a detailed explanation of Hazardous Area classification refer to www.victor-lighting.com

ZONE 1 - CATEGORY 2

VL125 Trident Fluorescent

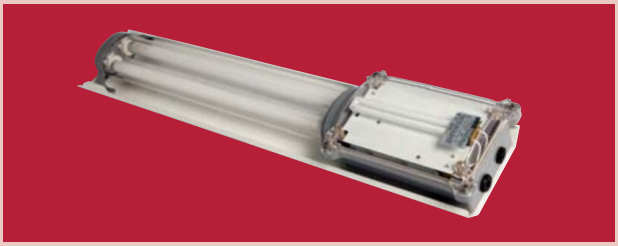
Part No	Description
TRIE/218/BI	2 x 18W Bi-pin Fluorescent
TRIE/236/BI	2 x 36W Bi-pin Fluorescent
TRIE/258/BI	2 x 58W Bi-pin Fluorescent



• Certified 2 GD Ex em IIC T4 • IP66/67 • Ambient -45˚C to +50˚C • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• Easy installation • Unrivalled UV protection • Cassette re-lamping technology • High frequency control gear
• Low profile • Pole mounting option available • Low voltage option available

VL126 Trident Emergency Fluorescent

Part No	Description
TRIE/218/BI/EM	2 x 18W Bi-pin Fluorescent
TRIE/236/BI/EM	2 x 36W Bi-pin Fluorescent
TRIE/258/BI/EM	2 x 58W Bi-pin Fluorescent



• Certified 2 GD Ex em IIC T4 • IP66/67 • Ambient -15˚C to +50˚C • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• Easy installation, Light weight yet robust • Cassette re-lamping technology • Low voltage option available
• Dedicated lamp for 3 hour emergency operation • Self test features available

VL19E Excalibur Fluorescent

Part No	Description
EXCE/218/BI	2 x 18W Bi-pin Fluorescent
EXCE/236/BI	2 x 36W Bi-pin Fluorescent
EXCE/218/MO	2 x 18W Mono-pin Fluorescent
EXCE/236/MO	2 x 36W Mono-pin Fluorescent

• Certified 2 GD Ex em II T4 • IP66/67 • Ambient -35˚C to +55˚C • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• Polycarbonate housing & stainless steel reflector • 2 x M20 cable entries • Self test features available
• Electronic ballast • Mono-pin & Bi-pin options

VL24E Excalibur Fluorescent

Part No	Description
EXCE/218/BI/EM	2 x 18W Bi-pin Fluorescent
EXCE/236/BI/EM	2 x 36W Bi-pin Fluorescent
EXCE/218/MO/EM	2 x 18W Mono-pin Fluorescent
EXCE/236/MO/EM	2 x 36W Mono-pin Fluorescent

• Certified 2 GD Ex emd IIC T4 • IP66/67 • Ambient -10˚C to +55˚C • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• Polycarbonate housing & stainless steel reflector • 2 x M20 cable entries • Electronic ballast
• 3 hour emergency duration - 1 lamp in operation

VL51A Viscount Fluorescent

Part No	Description
VISD/218/BI	2 x 18W Bi-pin Fluorescent
VISD/136/BI	1 x 36W Bi-pin Fluorescent
VISD/236/BI	2 x 36W Bi-pin Fluorescent
VISD/158/BI	1 x 58W Bi-pin Fluorescent
VISD/258/BI	2 x 58W Bi-pin Fluorescent

• Certified 2 GD Ex d IIC T6 (18W only) • Certified 2 GD Ex d IIB T6 (36W & 58W) • IP66/67 • Ambient -20˚C to +55˚C
• Voltage: 220-254V 50/60Hz AC/DC (110/130V option) • LM6 aluminium alloy, Borosilicate glass tube
• 2 x M20 cable entries • Electronic ballast

VL52A Viscount Emergency Fluorescent

Part No	Description
VISD/218/BI/EM	2 x 18W Bi-pin Fluorescent
VISD/236/BI/EM	2 x 36W Bi-pin Fluorescent
VISD/258/BI/EM	2 x 58W Bi-pin Fluorescent

• Certified 2 GD Ex d IIC T6 (18W only) • Certified 2 GD Ex d IIB T6 (36W & 58W) • IP66/67
• Ambient -20˚C to +55˚C (wattage dependant) • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• LM6 aluminium alloy, Borosilicate glass tube • Electronic ballast
• 2 x M20 cable entries • 3 hour emergency duration

VL77C/VL78C Recessible Fluorescent

Part No	Description
V77E/218/BI	2 x 18W Bi-pin Fluorescent
V77E/236/BI	2 x 36W Bi-pin Fluorescent
V78E/218/BI/EM	2 x 18W Bi-pin Fluorescent
V78E/236/BI/EM	2 x 36W Bi-pin Fluorescent

• Certified 2 GD eqm II T4 • IP65 • Ambient -40˚C to +45˚C (insulated) / -40˚C to +55˚C (non-insulated)
• Voltage: 220-254V 50/60Hz AC/DC (110/130V option) • Designed for plasterboard or M300 plank ceiling types
• 4 x M20 cable entries, two at each end • SOLAS B15 fire rating
• Emergency version - 90 minutes as standard, 3 hour option available

ZONE 1 - CATEGORY 2

VL104E Recessible Fluorescent

Part No	Description
104E/418/BI	4 x 18W Bi-pin Fluorescent
104E/436/BI	4 x 36W Bi-pin Fluorescent
104E/418/BI/EM	4 x 18W Bi-pin Fluorescent
104E/436/BI/EM	4 x 36W Bi-pin Fluorescent

• Certified 2 GD Ex eqm II T4 • IP65 • Ambient -20˚C to +40˚C • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• Designed for modular ceiling types • 3 x M20 cable entries • Terminals up to 4mm²
• SOLAS B15 fire rating • Emergency version - 90 minutes as standard, 3 hour option available

NOTE: Two lamp versions are available but will be supplied in a four lamp (600mm) body

VL114S Pathfinder Fluorescent

Part No	Description
PATE/111/CF	1 x 11W Compact Fluorescent
PATE/218/CF	2 x 18W Compact Fluorescent

• Certified 2 GD Ex em II T4 • IP66/67 • Voltage: 120-254V 50/60Hz AC/DC • Lightweight yet robust construction
• Easy Installation • Mounting orientation variations available • Low profile • Ideal for exit signs

VL114E Pathfinder Emergency Fluorescent

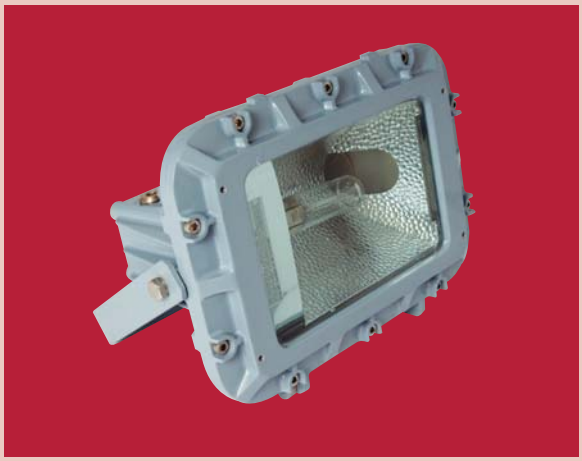
Part No	Description
PATE/111/CF/EM	1 x 11W Compact Fluorescent

• Certified 2 GD Ex em II T4 • IP66/67 • Voltage: 220-254V 50/60Hz AC/DC (110/130V option)
• Lightweight yet robust construction • Easy Installation
• Emergency lamp has integral battery back up as standard • Mounting orientation variations available
• Ideal for exit signs • 3 hour duration in emergency mode

VL64 Equal Plus Floodlight

Part No	Description
64ED/150/MS	150W HPS/Metal Halide
64ED/250/MS	250W HPS/Metal Halide
64ED/400/MS	400W HPS/Metal Halide
64ED/500/TH	500W Tungsten Halogen

• Certified 2 GD Ex de IIB T4 • IP66/67 • Ambient -20˚C to +55˚C • Voltage: 220-254V 50Hz (60Hz option)
• LM6 aluminium alloy, toughened glass plate • Integral control gear
• Excellent photometrics • Hinged cover for easy access and maintenance



VL65A Floodlight

Part No	Description
V65D/050/HS	50W HPS
V65D/050/MV	50W Mercury Vapour
V65D/070/MS	70W HPS/Metal Halide
V65D/080/MV	80W Mercury Vapour
V65D/125/MV	125W Mercury Vapour
V65D/250/TH	250W Tungsten Halogen

• Certified 2 GD Ex de IIB T3 • IP66/67 • Ambient -50˚C to +55˚C (lamp dependant)
• Voltage: 240V 50Hz (60Hz option) • LM6 aluminium alloy, toughened glass plate

VL34/VL35 Vanguard Bulkhead

Part No	Description
VANE/801/LE	8 x 1W White LED
VANE/801/LE/EM	8 x 1W White LED
VANE/801/LE/HE	8 x 1W Green LED
VANE/801/LE/EM/HE	8 x 1W Green LED

• Certified 2 GD Ex e mb IIC T4 Gb • Certified 2 GD Ex e ib mb IIC T4 Gb (Emergency version)
• Ambient -20˚C to +55˚C / Low temperature version -45˚C to +55˚C • Voltage: 110-254V 50/60Hz AC/DC
• Meets CAA (CAP 437) & ICAO guidelines on helicopter landing area lighting
• Energy efficient LED light source • Emergency version with battery backup available

ZONE 1 - CATEGORY 2

VL38 Titan Wellglass

Part No	Description
TI8D/070/MS	70W HPS/Metal Halide
TI8D/080/MV	80W Mercury Vapour
TI8D/125/MV	125W Mercury Vapour
TI8D/200/GL	200W GLS
TI8D/126/CF	1x 26W Compact Fluorescent

• Certified 2 GD Ex de IIC T4 • IP66/67
• Ambient -20˚C to +68˚C (Standard) / Low temperature version -50˚C to +68˚C (lamp dependant)
• Voltage: 220-254V 50 or 60Hz (120V option) • Flameproof type
• Terminal chamber has dual certification for Ex 'd' or Ex 'e' applications
• Lightweight construction • External reflector available for high bay lighting
• Additonal wattages and lamp options available

VL39 Titan Wellglass

Part No	Description
TI9D/150/MS	150W HPS/Metal Halide
TI9D/165/MS	165W HPS/Metal Halide
TI9D/250/MS	250W HPS/Metal Halide
TI9D/400/MS	400W HPS/Metal Halide
TI9D/250/MV	250W Mercury Vapour
TI9D/400/MV	400W Mercury Vapour
TI9D/500/GL	500W GLS

• Certified 2 GD Ex de IIC T4 • IP66/67 • Ambient -22˚C to +55˚C (lamp dependant)
• Voltage: 220-250V 50 or 60Hz • 120V option – QL lamps only • Flameproof type
• Lightweight construction • Terminal chamber has dual certification for Ex 'd' or Ex 'e' applications
• External reflector available for high bay lighting • Addtional wattages and lamp options available

VL147 Titan Wellglass

Part No	Description
TI7D/070/HS	70W HPS
TI7D/080/MV	80W Mercury Vapour
TI7D/150/HS	150W HPS
TI7D/200/GL	200W GLS

• Certified 2 GD Ex de IIC T4 • IP66/67
• Ambient -20˚C to +70˚C / Low temperature version -50˚C to +70˚C (lamp dependant)
• Voltage: 220-250V 50 or 60Hz • Maintenance free option available with Philips QL lamps (60,000 hours operation)
• Flameproof type • Additonal wattages and lamp options available

VL53 Marquis II Fluorescent

Part No	Description
MA2N/218/BI	2 x 18W Bi-pin Fluorescent
MA2N/136/BI	1 x 36W Bi-pin Fluorescent
MA2N/236/BI	2 x 36W Bi-pin Fluorescent
MA2N/158/BI	1 x 58W Bi-pin Fluorescent
MA2N/258/BI	2 x 58W Bi-pin Fluorescent

• Certified 3 GD Ex nA II T4 • IP65 • Ambient -20˚C to +45˚C • Voltage: 220-254V 50/60Hz AC/DC
• High frequency electronic ballast • Through wired as standard
• Slimline lightweight construction • Easy to install and maintain
• Glass Reinforced Polyester (GRP) body and robust polycarbonate diffuser

VL54 Marquis II Emergency Fluorescent

Part No	Description
MA2N/218/BI/EM	2 x 18W Bi-pin Fluorescent
MA2N/136/BI/EM	1 x 36W Bi-pin Fluorescent
MA2N/236/BI/EM	2 x 36W Bi-pin Fluorescent
MA2N/158/BI/EM	1 x 58W Bi-pin Fluorescent
MA2N/258/BI/EM	2 x 58W Bi-pin Fluorescent

• Certified 3 GD Ex nA II T4 • IP65 • Ambient -20˚C to +40˚C • Voltage: 220-254V 50/60Hz AC
• High frequency electronic ballast • 3 hour battery duration • Through wired as standard
• Slimline lightweight construction • Easy to install and maintain
• Glass Reinforced Polyester (GRP) body and robust polycarbonate diffuser

ZONE 2 - CATEGORY 3

VL71 Regent Floodlight

Part No	Description
REGN/150/MS	150W HPS/Metal Halide
REGN/250/MS	250W HPS/Metal Halide
REGN/400/MS	400W HPS/Metal Halide
REGN/500/TH	500W Tungsten Halogen

• Certified 3 GD Ex nA nR II • IP66/67 • Ambient -50˚C to +60˚C (dependant on lamp type)
• Voltage: 220-254V 50 Hz (60Hz option) • Marine grade stainless steel body • Lightweight construction
• Anti-glare shield option • Quick release fasteners for easy release and maintenance
• Wire guard available • Various bracket assemblies

VL100 Floodlight

Part No	Description
V10N/150/MS	150W HPS/Metal Halide
V10N/250/MS	250W HPS/Metal Halide
V10N/250/MV	250W Mercury Vapour
V10N/400/MS	400W HPS/Metal Halide
V10N/400/MV	400W Mercury Vapour
V10N/500/TH	500W Tungsten Halogen

• Certified 3 GD Ex nA nR II T3 • IP66/67 • Ambient -50˚C to +50˚C • Voltage: 220-250V 50/60Hz
• LM6 aluminium alloy body, toughened glass reflector

VL14 Monarch Pendant

Part No	Description
MONN/070/HS	70W HPS
MONN/080/MV	80W Mercury Vapour
MONN/125/MV	125W Mercury Vapour
MONN/160/MB	160W MBTF
MONN/200/GL	200W GLS

• Certified 3 G Ex nR II T4 (70W HPS & 80W MV lamp types) • Certified 3 G Ex nR II T4 (125W MV & 160W MBTF lamp types) • IP67 • Ambient -20˚C to +50˚C (dependant on lamp type) • Voltage: 220-254V 50 or 60Hz (lamp dependant) • Easy to install and maintain • Suitable for pendant or 45˚ inclination • Glass retaining mechanism

VL15 Monarch II Pendant

Part No	Description
MO2N/050/HS	50W HPS
MO2N/070/MS	70W HPS/Metal Halide
MO2N/100/MS	100W HPS/Metal Halide
MO2N/150/MS	150W HPS/Metal Halide
MO2N/250/MS	250W HPS/Metal Halide
MO2N/400/MS	400W HPS/Metal Halide
MO2N/080/MV	80W Mercury Vapour
MO2N/125/MV	125W Mercury Vapour
MO2N/250/MV	250W Mercury Vapour
MO2N/400/MV	400W Mercury Vapour

• Certified 3 GD Ex nA nR II • IP66 • Ambient -45˚C to +55˚C • Voltage: 220-240V 50Hz (50, 80, 100 & 125W) / 220-254V 50Hz (70, 150, 250 & 400W) • Corrosion resistant • Excellent light distribution • Easy access for wiring and control gear • Enclosed reflector for highbay applications • Wall, stanchion & pendant mounting options available

VL20 Vanguard Bulkhead

Part No	Description
VANN/070/HS	70W HPS
VANN/080/MV	80W Mercury Vapour
VANN/150/GL	150W GLS

• Certified 3 G Ex nR II T4 • IP66/67 • Ambient -50˚C to +35˚C • Voltage: 220-254V 50 or 60Hz (lamp dependant) • Lamp options: 70W SON, 80W Mercury Vapour & 150W GLS • Easily installed and maintained

Victor Lighting

Hazardous Area Lighting

Quick Reference Guide

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To calculate photometric values for lighting design, please use the free Victor Lighting design software package LiteGuide™

To request your copy, please contact your local Victor Lighting agent or download from our website www.victor-lighting.com

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