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Thorne & Derrick  
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WORLD'S LEADING MANUFACTURER  
OF HAZARDOUS AREA PORTABLE  
& TEMPORARY LIGHTING

## Micro and Mini Torch

Zones: 0, 1, 2, 20, 21 and 22



### Product Overview

The Micro and Mini Torches use high-tech light sources to give impressive performance with a compact size, designed for easy pocket storage, and are CE marked to the ATEX Directive and IECEx certified for safe use in potentially explosive gas, vapour, mist or dust atmospheres, where a T4 or T5 temperature class permits. All models are approved to Group I for use in mining applications.

The LED models; M-10 Micro, M-40 and M-60 Minis are approved as Category 1 equipment for use in Zones 0, 1 and 2, and M-20 Xenon Mini is approved as Category 2 equipment for use in Zones 1 and 2.

The M-10 Micro has a single white 5mm 'Nichia' LED light source and is powered by four alkaline LR44 'button cells', giving an impressive beam with a two hour duration from a very compact size. The M-20 Mini uses a Xenon filament bulb powered by two LR03 'AAA' cells, giving an excellent narrow beam of light with good range and up to 2.5 hours duration. The M-40 Mini has a cluster of three white 5mm 'Nichia' LEDs, and the M-60 Mini uses a single high power Cree LED giving remarkable light output; both products are powered by three alkaline LR1 'N' cells giving up to ten hours of usable light with the M-40 and up to 3.5 hours\* of usable light with the M-60. All supplied with cells.

The Micro and Mini Torches have an ergonomic design and are constructed from high quality thermoplastic resin, with excellent impact and chemical resistance and the polycarbonate lens is set-back within the lens ring to minimise risk of damage. All models have a lanyard hole (M-10 Micro supplied with neck cord), an integral pocket clip for secure retention and to prevent roll on a flat surface, and a push-button for single-handed switching, which is shrouded to guard against accidental operation. All models are certified IP67, sealed against water/dust ingress.

### Features & Benefits

- ATEX and IECEx Certified
- T4/T5 temperature class
- Ultra small size
- Lightweight, ergonomic design
- Proven impact resistance
- Single handed switching
- Switch protection shroud
- Integral pen style pocket clip
- IP67 water and dust tight
- Gas and Dust Approval
- Group I Mining Approval

### Certifications



1180

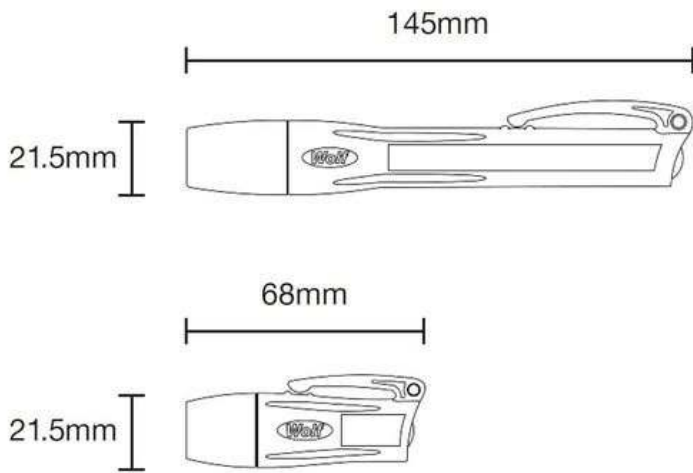
# Technical Specification

Product Reference		M-10	M-20	M-40	M-60
<b>Product Description</b>		LED Micro Torch	Xenon Mini Torch	LED Mini Torch	1W LED Mini Torch
<b>Code</b>	<b>Industrial</b>	II 1 GD Ex ia IIC T5 (Ta=50°C) tD A20 IP67 T80°C	II 2GD Ex ib IIC T4 tD A21 IP67 T80°C	II 1GD IIC T4 Ga (-40°C ≤ Ta ≤ +50°C) Ex ia IIIB T125°C Da IP67	II 1GD IIC T4 Ga (-40°C ≤ Ta ≤ +50°C) Ex ia IIIB T130°C Da IP67
	<b>Mining</b>	I M1 Ex ia I IP67	I M2 Ex ib I IP67	I M1 Ex ia I, Ma. IP67	
<b>Type of Protection</b>		"ia/ib" Intrinsic Safety			
<b>Area of Class (Gas)</b>		Zones 0, 1 & 2	Zones 1 & 2	Zones 0, 1 & 2	
<b>Temp. Class (Gas)</b>		T5	T4		
<b>Ambient Temp.</b>		-20°C to +50°C	-20°C to +40°C	-40°C to +50°C	
<b>Area of Class (Dust)</b>		Zone 20, 21 & 22	Zone 21 & 22	Zone 20, 21 & 22	
<b>Max Surface Temp. (Dust)</b>		80°C		125°C	130°C
<b>Certification</b>		Baseefa06ATEX0084 - IECEx BAS 06.0023			
<b>Enclosure</b>		Impact Resistant Thermoplastic, Electrostatic Non-hazardous			
<b>Lens</b>		Polycarbonate			
<b>Beam Type</b>		Medium Spot	Narrow Spot	Medium Spot	
<b>Light Source</b>	<b>Part No.</b>	-	M-201	-	-
	<b>Type</b>	1x5mm LED White (Nichia)	Xenon Filled Filament Bulb	3 x 5mm LED White (Nichia)	1 x High Power Cree LED
	<b>Rating</b>	-	2.3V 0.3A	-	1 Watt
	<b>Output</b>	30 cd	15 lm	3 x 30 cd	Up to 90 lm
	<b>Life</b>	25,000 hrs	30 hrs	25,000 hrs	
<b>Power Source</b>	<b>Part No.</b>	M-102 (4 pack)	M-202 (2 pack)	M-402 (3 pack)	
	<b>Type</b>	LR44 Primary Cells to IEC60086	LR03 Primary Cells to IEC60086	LR1 Primary Cells to IEC60086	

	<b>Volts</b>	4 x 1.5V	2 x 1.5V	3 x 1.5V	
<b>Light Duration</b>		Up to 2 hrs	Up to 2.3 hrs	Up to 10 hrs	1.5-3.5 hrs*
<b>Ingress Protection</b>		IP67 to EN60529:1992			
<b>Weight (incl. cells)</b>		25g	60g		

- \*M-60 battery duration/light output is dependent on battery make and type.
- All information has been gathered under laboratory conditions, the user must regard the values given as approximate.
- Changes may be made to the above specification without notification, details are available on request.

## Product Dimensions



## Light Output

### M-10

Spot Beam (approx. 13°)  
Peak luminous intensity at 2.5m **8 lux**

### M-20

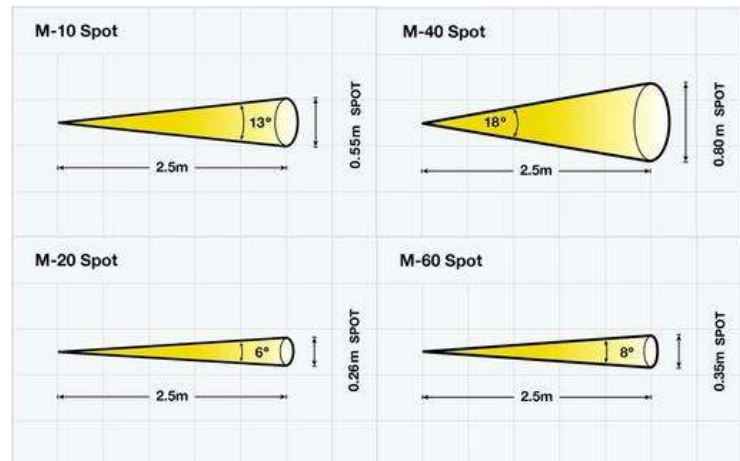
Spot Beam (approx. 6°)  
Peak luminous intensity at 2.5m **100 lux**

### M-40

Spot Beam (approx. 18°)  
Peak luminous intensity at 2.5m **15 lux**

### M-60\*

Spot Beam (approx. 8°)  
Peak luminous intensity at 2.5m **275 lux**



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ISO 9001  
BUREAU VERITAS  
Certification

