

All fire departments need fire scene lighting systems to ensure that they are ready to fight fires day or night or to advance during rescue missions. Helmet-mounted lamps are the preferred lighting solution because they enable hands-free operation. Another benefit is that the light follows the head movement of the wearer. This article will help you to select the most efficient helmet-mounted lamp for your application and will provide details of the wide range of **MSA flame-resistant lighting solutions for firefighting helmets which offer safe, continuous lighting** without blinding you.



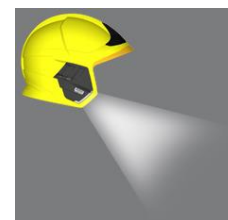
How to select the suitable lighting solution for your application?

You must first define what you wish to illuminate depending on what you are doing.



For complete situational analysis when entering a fire scene or for finding victims, you will need medium to long-distance visibility and **target illumination**. Your lamp will need to be powerful and offer a high level of smoke penetration in order to reach the target with a strong and focused light beam.

For reading a map, hands-free work, seeing hands and feet while operating in hazardous areas, **local area illumination** will be sufficient. Here the illumination distance will be between 0 and 1.5 metres and your lamp will need to offer high diffusion in order to provide good illumination. A bright and diffuse light source will be the solution.



Depending on what you wish to illuminate, you will then need to look at the power and light intensity criteria. For instance, you will analyse the base light power expressed in lumens. **The level of power which does not decrease over time** is also a key decision criterion, particularly in firefighting or rescue applications. We will focus on this topic later in the article.

You will then define the type of batteries you wish to use – rechargeable or not – followed by the need for a burnt-time indicator. If you select rechargeable batteries, you will need to consider the charging time, charging features and number of cycles.

Other criteria to be considered when selecting the correct helmet-mounted lamp include the housing colour (high visibility/photo luminescence elements), ATEX approvals, mechanical and **flame resistance**, the ease of use of such buttons handling when wearing gloves.

Of course, your choice will be governed by research on the best compromise between acceptable weight and limit in light power. In the end, nothing replaces a 'live' test.

The unique integrated LED lighting module for F1XF fire helmets

The lighting module on the Gallet F1 XF can be fully integrated into the lower rim of the helmet, thereby optimising balance to **prevent neck pain after it has been worn for long periods** and avoid any additional weight on / protrusion from the head.

It provides short range, proximity lighting for reading a map, hands-free work and viewing hands and feet while operating in hazardous areas

It features 2 LEDs on each side with innovative light distribution, both forwards and downwards. Light is always directed to the target. **This ensures that other people (colleagues or civilians) are not blinded during conversation.**



This module is also easy to use: It is operated via a switch located on the rear right side. It can be retrofitted in a flash on any existing Gallet F1 XF helmets.

This integrated lighting system is certified for safe use in ATEX areas. **The flame and shockproof position** also ensures durability for firefighters, whatever their mission.

Of the thousands of integrated LED lighting modules sold so far, it is worth mentioning that the major Australian fire brigade – FRNSW (Sydney) – selected our Gallet F1 XF with the integrated lighting module to equip its 8000 firefighters.



Full range of standard clip-on LED lamps

MSA also offers ATEX-approved LED lamps that can be easily clicked onto the various generations of F1 helmets via an integrated or additional outer bracket. To improve balance, this bracket is also located on the lower rim of the helmet.

The low position of this lamp also prevents your conversation partner being blinded while the angle of the clip-on lamp can be individually and firmly adjusted during operations.

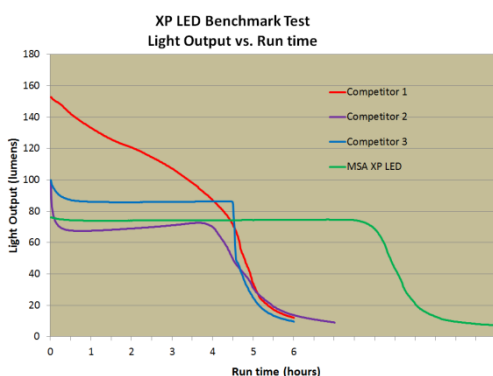
Clip-on helmet lamps are tested and certified by the public research body as external accessories for fire helmets, **proving and guaranteeing their flame resistance.**



MSA offers a variety of performance and operating concepts for different applications from the XS model which offers short-range lighting for reading maps to

the XPS model and XP LED models which offer medium to long-range lighting with high penetration in heavy fume environments. The ASR model is a rechargeable lamp which also offers medium to long-range (1 to 20 metres) lighting and features an additional red LED to indicate the wearer's position.

Focus on continuous lighting and MSA lamps



For firefighting operations, a firefighter requires **constant lighting** throughout the complete operation which can last several hours, and will need the same level of power at the beginning and end of the mission.

Most of the existing lamp manufacturers advertise a very high power performance for their lamps, but in most cases this is the initial brightness value and not constant brightness. After a limited time, the power in lumens drops dramatically.

MSA wants to offer constant LED illumination over nominal burn time.

For more information about the MSA fire helmet-mounted lamps, please download the MSA lighting solution [brochure](#).