

# Messenger: Not Just a cap lamp

Not only a cap lamp, the Messenger RT cap lamp is a robust, simple two-way text messaging device from Northern Light Technologies® (NLT) that provides powerful real time communication in a convenient and intuitive package. The 433 receiver embedded in the unit allows the lamp to be tracked by placing NLT active RFID tags in key locations; this tag information is then sent to the server by the lamp via the Wi-Fi network. Free text messages (up to 60 characters) are sent via the Wi-Fi network through Northern Light Technologies' Digital Mine Software and received by the cap lamp user within seconds.

A brief flashing sequence on the LED cap lamp alerts the miner a message has been received, with the duration and persistence of the flash indicating the priority level of the communication. The miner uses a toggle switch to read the message, which is scrolled across the LCD display, and uses the same toggle to send an appropriate response from 40 predetermined messages. Multiple replies can be sent in response to the same message, with each response uniquely logged and time-stamped on the server, creating real-time updates as underground circumstances



### Specifications:

**Battery Charge Time**  
< 12 hours

**Battery Discharge Time**  
• Main LED > 12 hours

**Emergency Flashing**  
• n/a

**Battery Lifecyle**  
• 500 Minimum

**Weight**  
• 1.6kg (3.4 lbs)

**LUX**  
• 3,000

**Charger configurations**  
• Single, 10 and 20 unit modules 40 unit rack; 12V DC adapter for vehicle connection

**Charger Power Source**  
• AC line voltage range from 120V +/- 10%, 220V +/- 10%,  
• 12V AC input can also be used in case of retrofit to existing racks and transformers

**Charger Temperature Range**  
• 0°C - 30°C / 32°F - 86°F  
(Optimum: 15°C - 20°C / 59°F - 68°F)

**Lamp Storage Temperature**  
• -20°C - 60°C / -4°F - 140°F  
(Optimum 10°C - 20°C / 50°F - 68°F)

**Primary LED Life**  
• 20,000 hours

**Secondary LED Life**  
• 20,000 hours

**Ingress Protection**  
• IP 67

**Operating Ambient Temperature**  
• Ta = 0°C - 50°C / 32°F - 122°F

**Charging Current**  
• 2A

**Approvals**  
• IECEx, MSHA

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