

**Ex ia I IP67**

KC3D-Ex has two LED light sources. The Main LED, a high-power LED located in the middle of the reflector, is for both normal and high-beam illumination. The Emergency LED, a low power LED located on the brim of the reflector, can operate for an extended period during an emergency. KC3D-Ex features a superior illumination in just 140g, even less than the headpiece of a traditional caplamp. It is suitable for most underground mining applications.

LED lighting
IP67 rated casing
Charging banks or
Individual chargers
Multiple applications
Maintenance free

OPERATIONS

- Main Mode:** For normal working operation, delivering good illumination in excess of 14 hours duration.
High-Beam Mode: Strong light beam for long distance projection, spotting, etc. Should only be used for short periods because the heavier battery drain shortens light duration in this Mode to around 8 hours.
Auxiliary Mode: Power saving for long operation and low level illumination.
Off Mode: The Caplamp is switched off.
- ▲ Always starts up from the Main Mode when switched on.
 - ▲ By toggling the operating button the Caplamp goes through:
Main Mode > High-Beam Mode > Auxiliary Mode > Off Mode
 - ▲ Holding the button down for 2 seconds switches the Caplamp off directly.
 - ▲ If the lamp is kept in the High-beam Mode for 20 minutes, it will automatically go to the Main Mode.

FEATURES

- ▲ Free you from the inconvenience of electrical cable and the burden of a battery pack, and also eliminates the possibility of any accident by bumping or snagging cable cord and increase working efficiency;
- ▲ Very light weight, even lighter than a headpiece, only of traditional caplamps;
- ▲ Adjustable angle to point wherever you see, near or far ---- to read and write, repair equipment or check the ceiling, significantly reducing dead corners
- ▲ Multiple operating modes for different applications;
- ▲ Natural LED light for a comfortable light environment;
- ▲ IP67 housing with a fully integrated and sealed structure, and solid light source designed for the harshest underground mining environment;
- ▲ Extraordinary safety - no acid or any toxin to spill, no flammable materials exposed, no heat on lens surface, no danger for personnel at all;
- ▲ Various ways to wear, mount or attach for different applications, used as a caplamp, headlamp, torch or portable lamp;
- ▲ Easy to charge. Strong protection from over voltage, over current, over charge and over discharge;
- ▲ Various models of charging banks and single chargers available in different charging units and power input;
- ▲ Very low maintenance to significantly reduce your lamp room cost. Easy to clean; No cable, bulb and headpiece to check or change; No repairing; No dedicated staff to look after charging.



How SAFETY is improved

- ▲ No electric cord to be bumped or snagged;
- ▲ Significantly reduces miner's burden;
- ▲ No back pain and injury any more;
- ▲ No acid or toxin to spill;
- ▲ No heat on lens surface; no hot parts to cause fire;
- ▲ IP67 case for the harshest underground mine environment.

How WORK EFFICIENCY is improved

- ▲ No cord and heavy battery that hinders work performance;
- ▲ Minimized size and weight reduces burden on miners;
- ▲ Adjustable angle and portability for extraordinary flexibility;
- ▲ Time saved in attaching light and moving to workplace; time saved in issuing light to miners;
- ▲ Less staff in Lamp Room.

HOW TO USE

Caplamp: Simply inserted in the lamp bracket on the helmet. The lamp clip is designed to fit in any Australian and American miner's helmet.

Headlamp: Worn on a plain hard cap using our *Cap Strap*, or worn on the head directly by removing 4 *Cap Hooks* on the *Cap Strap*.

Mini-Torch: Just hold in your hand, easily carried in a tool box, pocket or on your belt.

Portable Lamp: Clamped to an object or magnetically attached to a metal using our *Magnetic Lamp Bracket Clamp*, worn on the belt using our *Belt Worn Lamp Bracket*, or fixed to a location using our *Lamp Bracket*.

Others: Various accessories available for other ways to wear or mount the lamp, such as *Bar Bracket*, *Strap Bracket*, *Handle & Pocket Bracket*, *Tripod Bracket*, *Lanyard*, *Wrist Strap* and *Lamp Cluster*. Other accessories include, a handy *Mining Lanyard* to connect the lamp to your belt to prevent the helmet from falling away in such situations as in front of a ventilation machine, *Helmet Chin Strap* to hold your helmet in place in active situations.



CHARGING FACILITIES

Charging Banks: Three models available to charge 8, 36 or 52 lamps together from different powers.

Mains Charger: Charge the lamp from a Mains outlet (*standard accessory in every package*)

Vehicle Charger: Charge the lamp from the cigarette lighter in a car or truck (12/24VDC).

SPECIFICATIONS

Operating time:	14 hours (Main Mode)
Luminous intensity:	2800 cd (Main Mode)
Charging time:	8 hours
Battery:	2.8 AH, 3.7V
Battery lifetime:	80%C after 500 full charging cycles
LED lifetime:	30,000 hours
Weight:	140 g
Enclosure:	IP67
Warranty:	1year replacement

CERTIFICATION

Intrinsically Safe



IP67

Ex Code: Ex ia I

Certificate #: IECEx TSA 10.0006X

ANZEx 10.3012X