



**A** leader in high-reliability keyboards, CMC Electronics is at the forefront of night vision compatible and sunlight readable aerospace instruments for military applications.

Our engineering team will offer proven design solutions using the most appropriate light source for every application, LED, EL or incandescent lamps. No one else can offer as much experience in updating your keyboard designs, and in replacing older incandescent backlighting with higher performing LED.

We integrate electronics of different levels of complexity, from photodiodes to microprocessor logic, and combine general data-entry keys with special purpose switches and indicators.

Our military keyboards will perform flawlessly through shock, vibration and humidity, to MIL-STD-810. They are ideal for data entry and

communications in airborne, ground-based and naval environments.

From specification definition to final qualification, CMC Electronics will support you every step of the way. Our customer focus gives us a better understanding of your project.

With keyboards in cockpits, ships and radios around the world, CMC Electronics has the know-how to meet your requirements.

#### GENERAL

- Aluminum, MIL-PRF-5425 acrylic or molded frame.
- Acrylic, polycarbonate or silicone rubber keys, LED, incandescent or EL illumination source.
- Integrated driving electronics for LED modulation, available for 28 VDC, 5 VDC and 5 VAC supply.
- Illuminated line selects in aluminum or plastic frame with uniform surface finish.
- Illumination performance IAW SAE-AS7788 or customer specific requirements.
- Night Vision compatible per MIL-STD-3009, MIL-L-85762.



## MILITARY KEYBOARDS

Custom designed keyboards exceed MIL-STD requirements

Switch life exceeds 1,000,000 activations with high tactile feedback

Light sources include LED, EL and incandescent lamps

Voltage of LED keyboards tailored to match incandescent sources for complete cockpit brightness uniformity

Expertise to replace incandescent light source with LED, without changes to external keyboard design

Integrated control devices

Fast prototyping

- Annunciators, designed per customer requirements or MIL-S-22885 optical performance.
- Assembly of optical filters with MIL-C-14806 or MIL-C-675 anti-reflective coating with optional ITO coating.
- Finishing as per FED-STD-595 color or custom specific.
- Laser etched marking per SAE-AS18012, design of custom font and symbols.

#### CONSTRUCTION

- High-performance integrated dome switches with positive tactile feedback.
- Momentary action, SPST gold or silver contact.
- Surface mount technology or PC pins/tabs.
- Sealed component.

#### ELECTRICAL

- Switching power .2 VA to 3 W
- Switching voltage min/max 20 mV/100 V
- Switching current min/max 1 mA/50mA
- Dielectric strength (50 Hz, 1 min) >250 V
- Operating life >1,000,000 activations
- Contact resistance >10E9 ohm
- Contact bounce <1 ms

#### ENVIRONMENTAL

CMC's keyboards are designed and manufactured to exceed environmental requirements of MIL-STD-810, RTCA/DO-160 and many other industry specifications.



CMC Electronics –  
A World Leader in  
Custom Display  
Products

