# CARGO LIGHTING FIXTURES

**PROVEN**

## Quality, Dependability and Reliability

AvtechTyee's lighting fixtures have been standard equipment aboard the C17 aircraft since the programs inception. Recently, the same design has been applied to the USAF C-5 upgrade program. The fixtures are designed to operate over the -40 to +71 degree C temperature range and are able to withstand 9 G's of random vibration and meet all other environmental requirements typical of a military or commercial freighter/cargo application.

Integrated within the fixture are two electronic ballasts which use 115 VAC, 400 Hz power. The ballast also boasts a 20:1 dimming capability. The fixtures use four T10 lamps and supply up to 160 watts of fluorescent lighting power per fixture.

### C17 Lighting Fixtures

Both overhead and sidewall fixtures are used in the aircraft, with critical engineering demands put on the equipment due to the severe service typical of military cargo transport missions.

- Qualified to military standards
- Ballast contains unique low temperature circuit giving the design the ability to operate down to -40 degrees C
- Rugged, suitable for any cargo loading application
- Able to operate in high vibration environments
- Fixture and ballast MTBF in excess of 100,000 flight hours
- Fixtures incorporate Avtech's patented electronic ballast
- Fixtures are made to facilitate easy removal and replacement of lamps by the use of a swing-away lens assembly.

AvtechTyee Corporation

6500 Merrill Creek Parkway

Everett, Washington 98203

www.AvtechTyee.com

Tel: (425) 290-3100

Fax: (425) 513-6474

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## SPECIFICATIONS

| Section | Condition | Category |
|---|---|---|
| Power Input | MIL-STD-704C | Paragraph 5.2 |
| Electromagnetic Compatibility | MIL-STD-462<br>MIL-STD-461<br>Paragraph 5.4.4<br>Paragraph 5.4.5<br>Paragraph 5.4.6<br>Paragraph 5.4.7 | Notice 2, Class A1<br>Notice 3<br>CE03 0.02 to 50 MHz Conducted Emissions<br>CE04 0.02 to 50 MHz Conducted Emissions<br>RE02 14 kHz to 1 GHz, Radiated Emissions<br>RE02 14 kHz to 1 GHz, Radiated Emissions |
| Temperature Altitude | MIL-STD-810C | Method 504.1, Category I |
| Vibration | MIL-STD-810C | Method 514.2, Category b.2 |
| Salt Fog | MIL-STD-801C | Method 509.1, Paragraph 2.0-2.3 |
| Fungus | MIL-STD-454 | Table 4-1, Group I |
| Humidity | MIL-STD-810C | Method 507.1, Procedure i |
| Shock | MIL-STD-810D | Method 516.3, Procedure I and V |
| Sand and Dust | MIL-STD-810C | Method 510.1 |

A significant benefit of AvtechTyee's fluorescent lighting assemblies are the electronic ballasts incorporated into the designs. These state-of-the-art ballasts are half the weight of conventional ballasts and have a "universal" design. Each part number can serve different lamp requirements, plus one ballast can drive up to two lamps, resulting in sizable weight and cost savings.

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