

The C12473 is a forced air-cooled thermoelectric cooler designed for 25 mm square head-on photomultiplier tubes and for the R11265 series metal-package photomultiplier tubes. Cooling a photomultiplier tube is effective in reducing thermal noise from the photocathode and improves the signal-to-noise ratio (S/N ratio).



C12473 + E13778 (Sold separately)

FEATURES

- Air-cooled thermoelectric cooler using a peltier module
- High cooling capability:
ΔT=25 °C (relative to ambient temperature)
- Easy to handle
- Compact and lightweight

SPECIFICATIONS

Parameter	Description / Value		Unit
Cooling method	Thermoelectric cooling using Peltier module		—
Peltier input current	Max.	2.0	A
Heat exchange medium	Forced air		—
Cooling temperature (Δt)	Min.	25	°C
Time to stable cooling temperature	Approx. 30		min
Optical window material	Silica glass (170 nm to 2200 nm)		—
Applicable PMTs (sold separately)	R1924A, R3550A R1925A, R5070A	R11265-100, R11265-200 R11265-300, R11265-20 [Ⓐ]	—
Applicable socket assembly (sold separately)	E2924-01 (when used with the A12769)	E13778	—
Supply voltage for fan	+12		V
Standard voltage output of temperature sensor at +25 C (298.2 K)	+2.982		V
Temperature coefficient of temperature sensor	0.01		V/°C
Operating range of temperature sensor	-25 to +35		°C
Operating ambient temperature	+5 to +35		°C
Operating ambient humidity (No condensation)	Below 75		%
Storage temperature	-20 to +50		°C
Storage humidity (No condensation)	Below 80		%
Weight	307		g

[Ⓐ]Cannot be used with the R11265U-xxx (U type).

THERMOELECTRIC COOLER FOR HEAD-ON PMT C12473

Figure 1: Spectral transmission characteristics of optical window

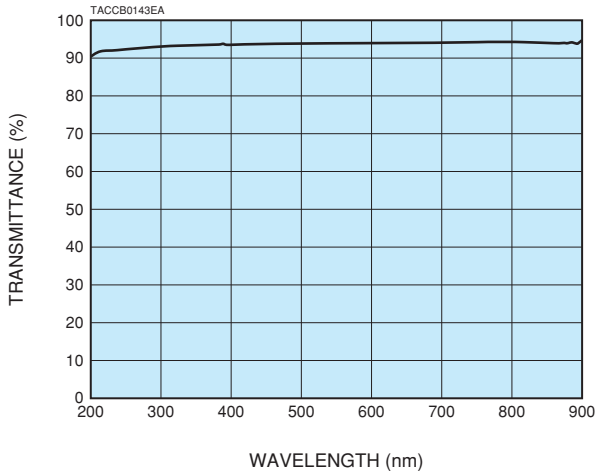


Figure 2: Cooling characteristics

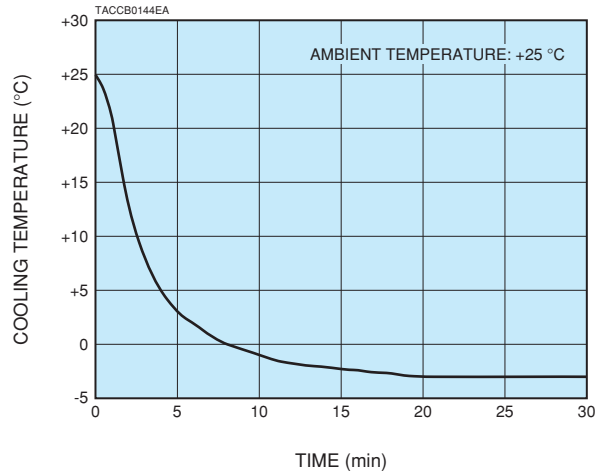


Figure 3: Example of dark count when cooled

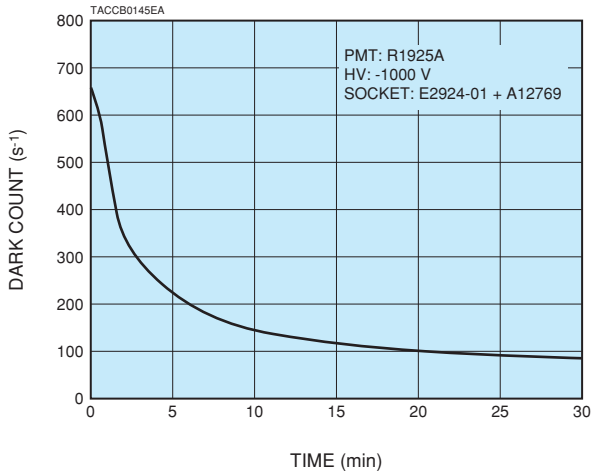


Figure 4: Voltage output of temperature sensor

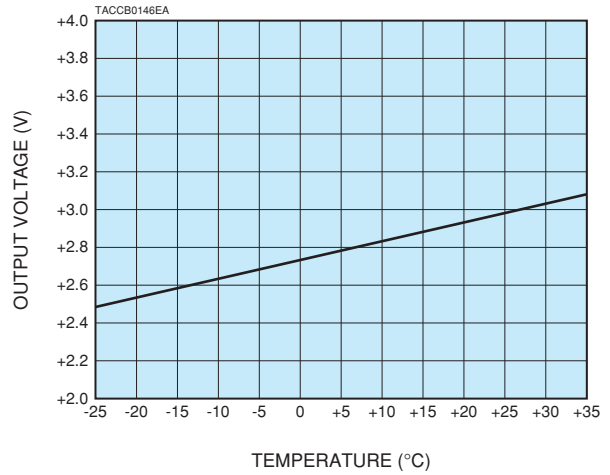
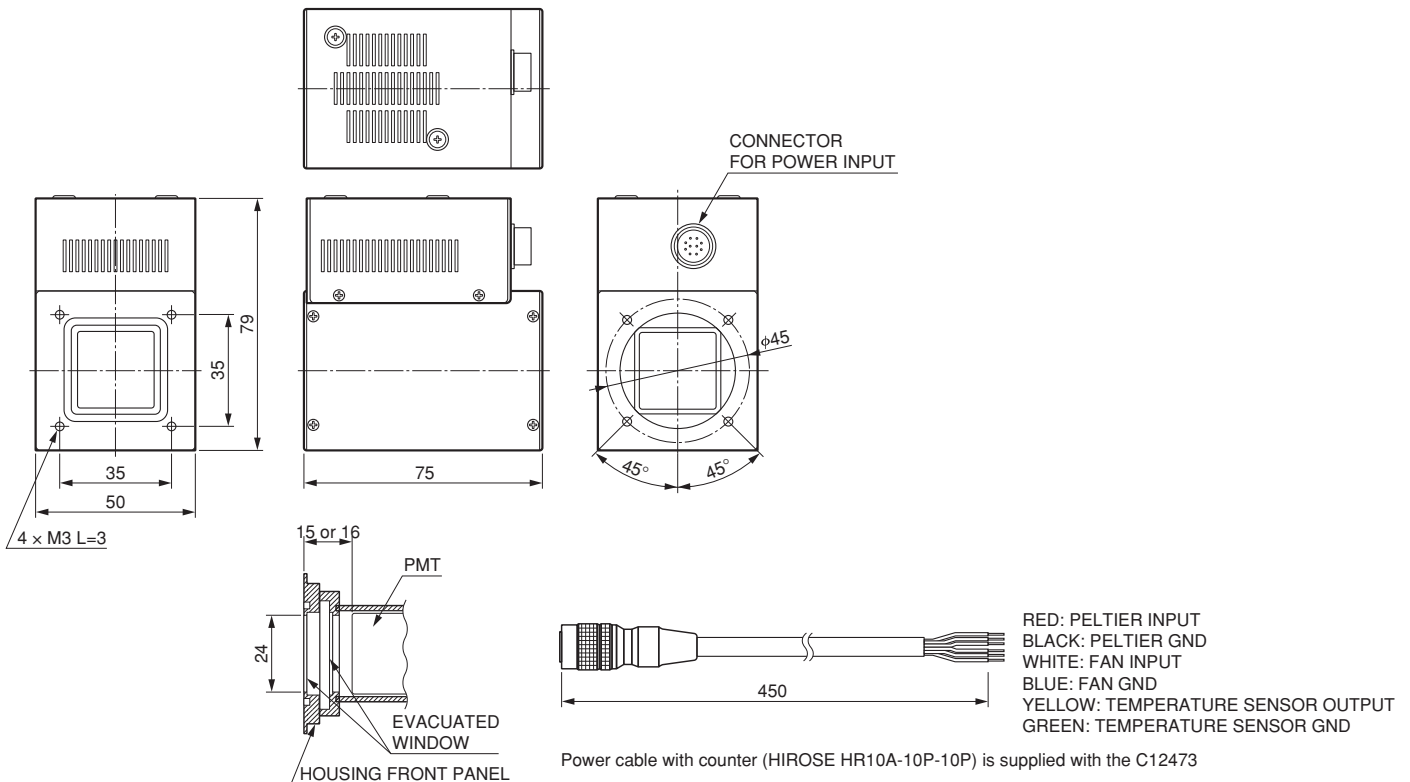
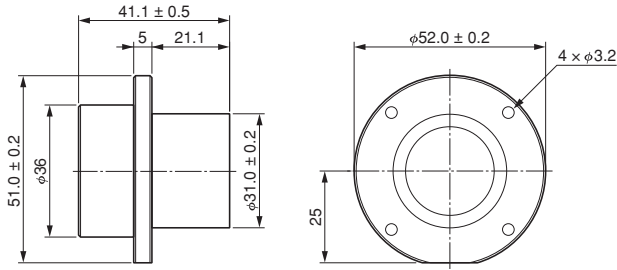


Figure 5: Dimensional outline (Unit: mm)



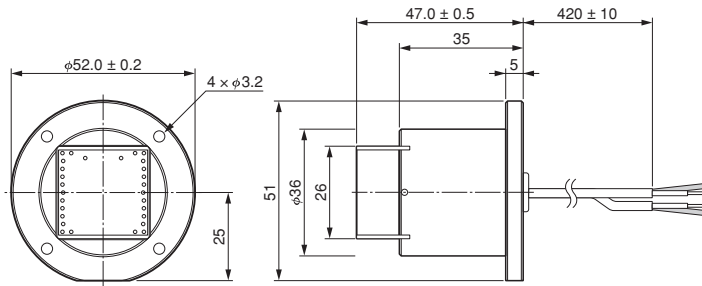
OPTION (SOLD SEPARATELY)

HOUSING A12769

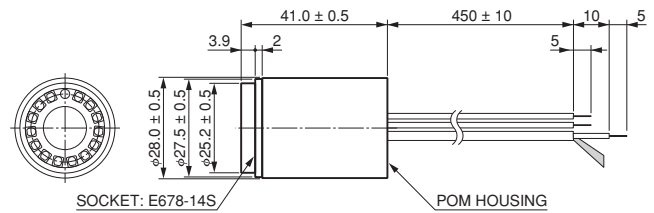


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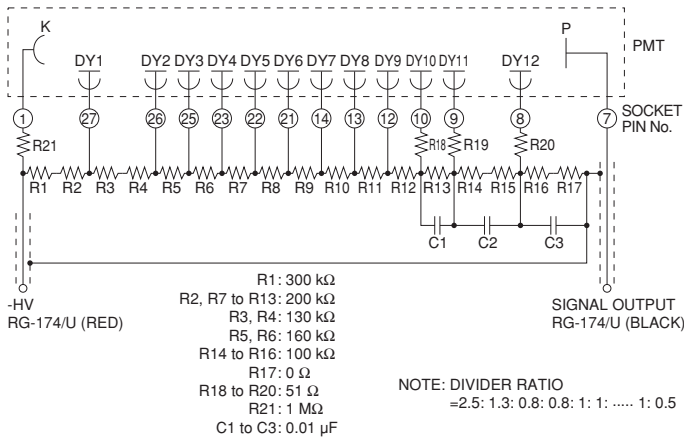
D TYPE SOCKET ASSEMBLY E13778



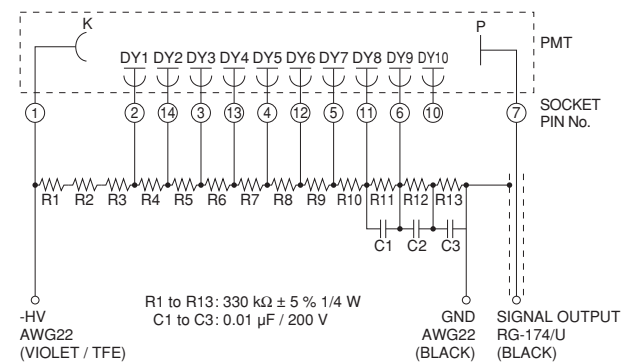
D TYPE SOCKET ASSEMBLY E2924-01



NOTE: * IT'S POSSIBLE TO ATTACH MHV / SHV FITTING RG-174/U.



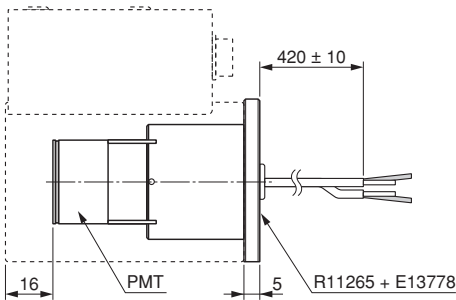
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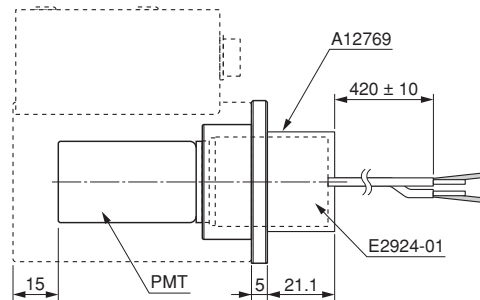
CONNECTION EXAMPLE

E13778 + R11265



TACCA0352EA

A12769 + E2924-01 + R1925A



TACCA0351EA

THERMOELECTRIC COOLER FOR HEAD-ON PMT C12473

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