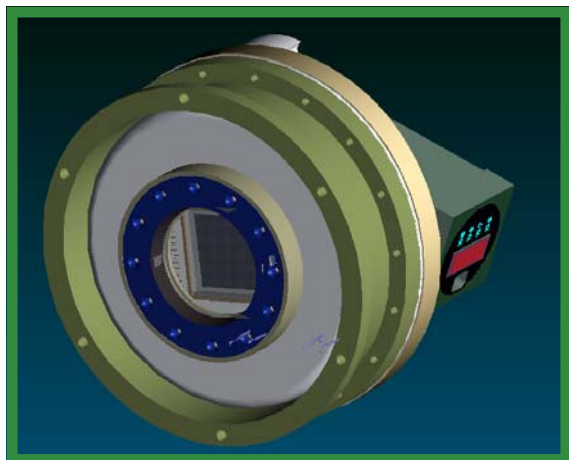


# SIT-400 Data Sheet

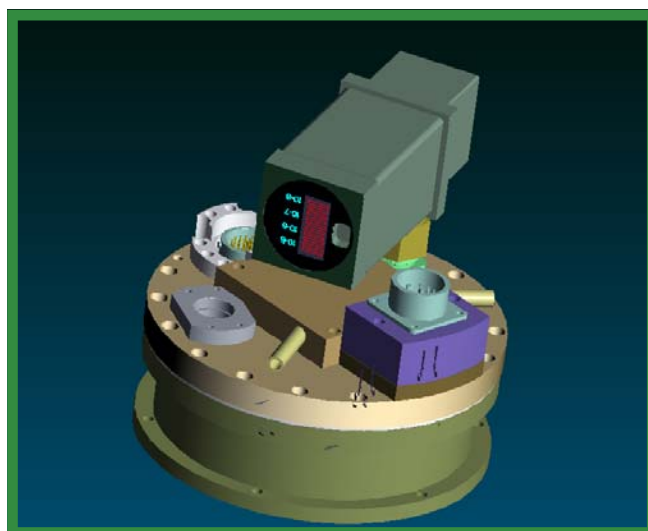
The Sci-in Tech four-stage thermoelectrically cooled camera cools a 2K<sup>2</sup> CCD to -70°C with liquid cooling @ +20°C. Window sizes from 2" diameter to 3-1/2" diameter. Window heater prevents condensation from forming on the window. The Sci-in Tech RV-500 valve port is standard. All Metal seals provide excellent vacuum performance. Ion Pump provides 10-6 torr to 10-7 torr vacuum without periodic pumping .



Front view shows the stainless steel housing and mounting tube. Six holes mount the camera or the PS-250 shutter. Four wires feed into the inner bore of the mount tube, two wires for the window heater, and two spares to use for other devices, (shutter, switch, sensor, etc).


Rear view shows the centrally located liquid cooler. Other features are:

- 12:00 - Signal connector
- 2:00 - Ion pump connection
- 6:00 - Power connector
- 10:00 - Vacuum valve port



## Standard and Custom Design

Cameras can be made with E2V, Imager Labs, Fairchild, SITe, Kodak, and others, according to customer specific requirements. CCD shape, size , mounting configuration and wiring vary considerably and have to be considered for every camera head. While most CCDs fit with the standard housing, some might involve a modified design.

							
CCD OPERATING TEMPERATURE MEASUREMENT							
CCD TYPE	SERIES CAMERA	WIRE HARNESS	CCD CHAMBER ENVIRONMENT	T.E.C. COOLING	TEMPERATURE		
					AMBIENT	CCD TEMP	T
SITe 2Kx2K 15μ	SIT-300	WITH	VACUUM	AIR	+22°C (295K)	-62°C (211K)	84°C
SITe 2Kx2K 15μ	SIT-300	WITH	ARGON PURGE	AIR	+22°C (295K)	-48°C (225K)	70°C
SITe 2Kx2K 15μ	SIT-300	WITH	NITROGEN PURGE	AIR	+18°C (291K)	-39°C (234K)	57°C
SITe 2K x 2K 24μ	SIT-400	W/O	VACUUM	LIQUID	+17°C (290K)	-72°C (201K)	89°C
E2V 2K x 2K 13.5μ	SIT-400	WITH	NITROGEN PURGE	LIQUID	+22°C (295K)	-46°C (227K)	68°C
E2V 2K x 2K 13.5μ	SIT-400	W/O	VACUUM	LIQUID	+20°C (293K)	-73°C (205K)	93°C
E2V 2K x 2K 13.5μ	SIT-400	WITH	VACUUM	LIQUID	+20°C (293K)	-69°C (204K)	89°C

# SIT-400 Data Sheet

## SIT-400 STANDARD SPECIFICATIONS

- ▶ STAINLESS STEEL & GOLD PLATED CU REAR PLATE
- ▶ WELDED AND VACUUM BRAZED CONSTRUCTION
- ▶ ALL METAL SEALS
- ▶ PLATINUM RTD TEMP SENSOR

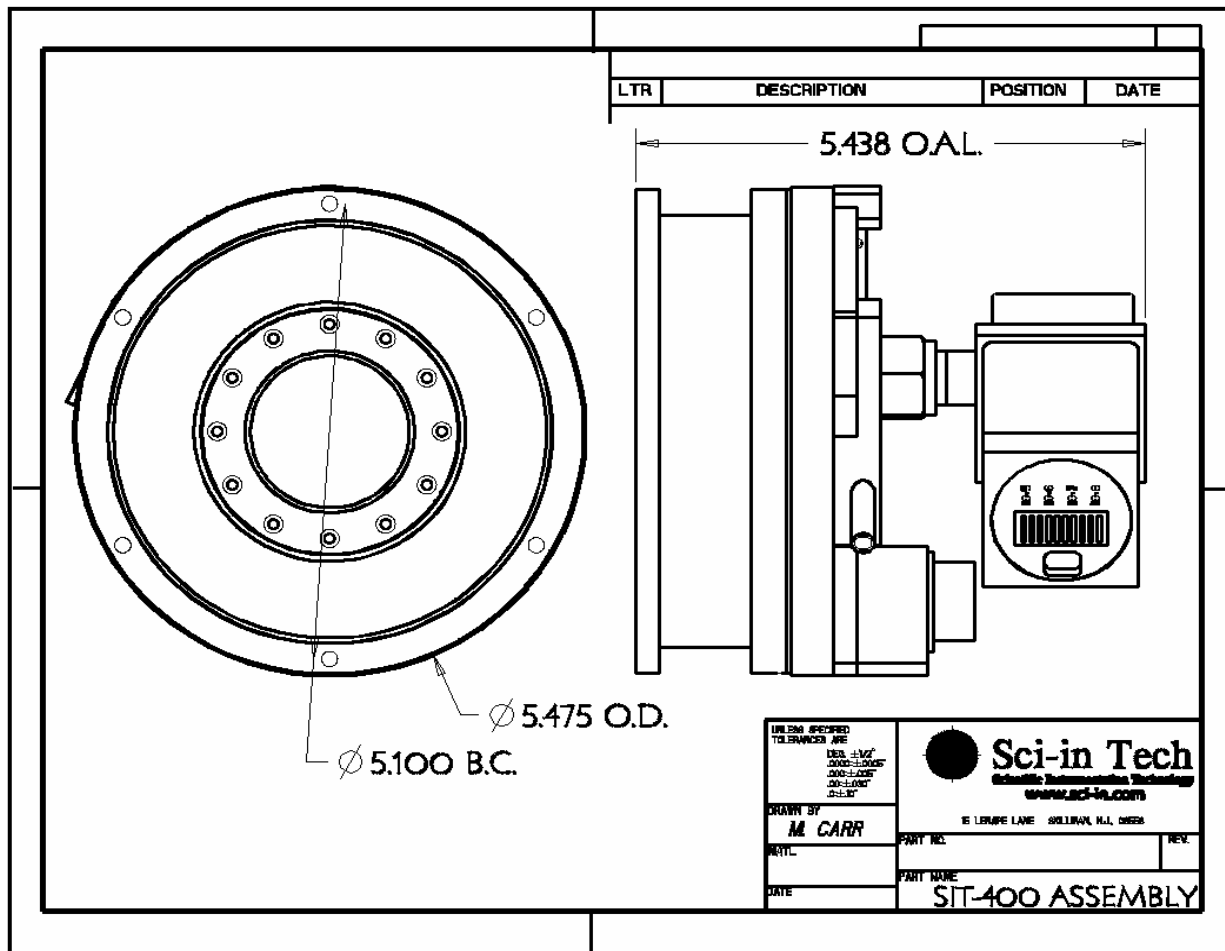
- ▶ WINDOW SIZES 2.00"Ø TO 3.50"Ø, .125" TO .250 THICK
- ▶ WINDOW MATERIAL UV GRADE FUSED SILICA
- ▶ 1/4λ 2x AR COATED
- ▶ WINDOW HEATER (20 OHMS)

- ▶ RV-500 VALVE PORT
- ▶ REAR PLATE TEC THERMAL PROTECTION SWITCH

- ▶ LIQUID COOLED COPPER HEAT EXCHANGER
- ▶ 4-STAGE THERMOELECTRIC COOLER, 12V DC, 11.0 A

**TEC ELECTRICAL POWER= 12 VDC. 11.0 A. (132 W), LIQUID COOLING= H<sub>2</sub>O @ 21°C, ~1 to 2 L/min**

**Please contact us for pricing and delivery information**



Please note that while Sci-in Tech provides customer assistance in integration of components by third party vendors, we do not have full access to data concerning the use and application of Sci-in Tech camera housings. Therefore, Sci-in Tech assumes no liability and is not responsible for customer applications, electronics, CCDs or product or software design or performance relating to third party systems or applications incorporating Sci-in Tech products