

Dual Axis Electrolytic Tilt Sensors – *SP5000 and AU6000 Series*

The *SP5000* and *AU6000 Series* of Dual Axis Electrolytic Tilt Sensors afford unparalleled price, performance, quality, and exceptional reliability. These hermetically sealed sensors are produced in an automated environment, resulting in a high level of uniformity from sensor to sensor. Geared towards the **OEM** marketplace, they feature a PC board mountable design, no moving parts, and a symmetrical pin design which eliminates installation orientation concerns. A variety of models are available to fulfil all applications and budgets.

Applications

- *Automotive* • *Industrial* • *Aerospace* • *Construction* • *Medical*
- *Agricultural* • *Oceanographic* • *Geophysical* • *Architectural* • *GPS*

Specifications



Characteristic	Model			
	<i>SP 5000-A-000</i>	<i>SP 5020-A-000</i>	<i>SP 5003-A-000</i>	<i>AU 6004-A-001</i>
Total Range (degrees)	+/-45	+/-60	+/-20	+/-70
Output (Vdc/arc second) *	0.13	0.10	0.26	0.11
Resolution (arc degrees)	0.02	0.01	0.005	0.05
Repeatability (arc degrees)	0.04	0.03	0.02	0.20
Symmetry @ 1/2 Scale (%)	5	5	5	50
Linearity - % @ 1/4 Scale	0.8	0.6	0.2	5
Linearity - % @ 1/2 Scale	3	4	1	15
Null Impedance (Kohms)				
+25 degC	3.4	2.2	3.1	3.0
+80 degC	1.7	5.1	1.6	5.1
-40 degC	13.0	7.8	11.0	50.0
Settling Time (mSec)				
+25 degC	160	240	270	2300
+80 degC	160	240	350	100
-40 degC	250	270	210	4000
Null Stability, 12 hrs @25 deg.C (arc deg's, typ.)	0.04	0.04	0.03	0.10
Cross Coupling (degrees)				
15 degrees	0.7	1.3	1.3	1.3
30 degrees	1.6	2.7	2.0	3.0
45 degrees	2.9	4.5	5.9	6.0
Bore Sight Error (degrees)	3.0	3.0	3.0	-
Temperature Range (degrees C)				
Operating	+80 to -40	+80 to -40	+80 to -40	+50 to -20
Storage	+125 to -55	+125 to -55	+125 to -55	+90 to -40
Temp Coefficient of Null (arc seconds/degC)	20	20	10	20
Temp. coefficient of Scale (%/deg.C, typ.)	0.10	0.06	0.10	0.05

* = Output levels derived using MUPI-2 Signal Conditioner.

Note; The electrolyte used in these sensors is an Alcohol based fluid, contains no heavy metals, and is



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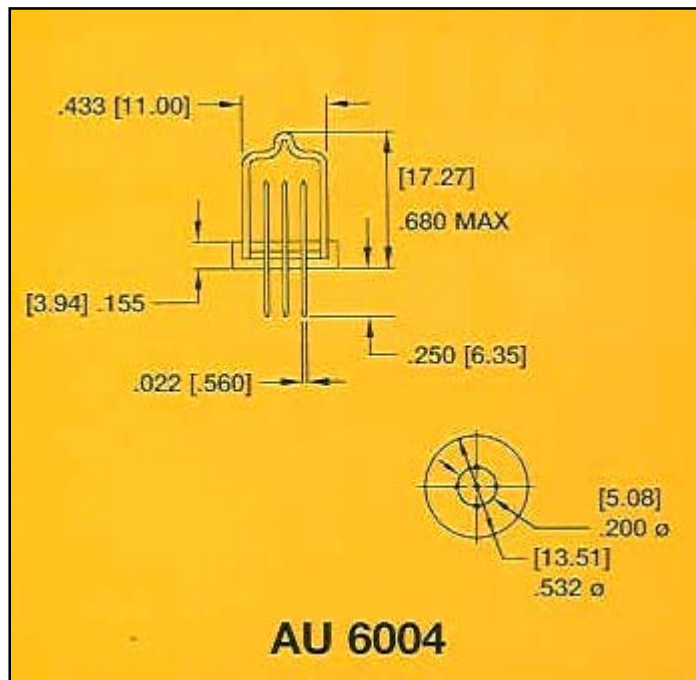
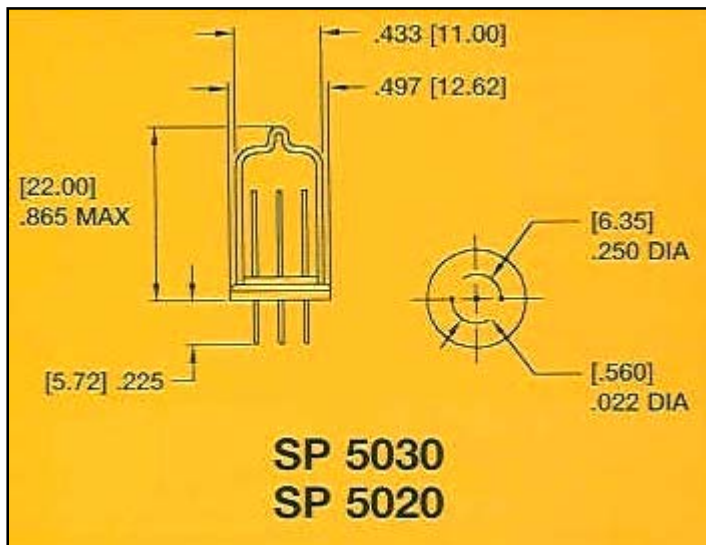
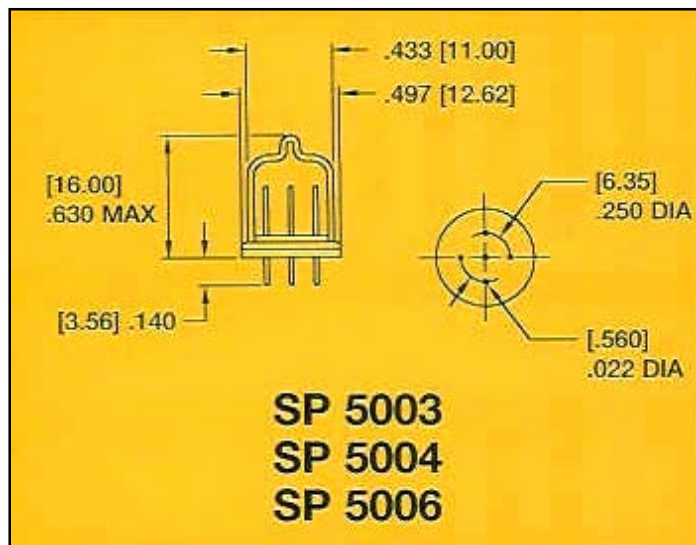
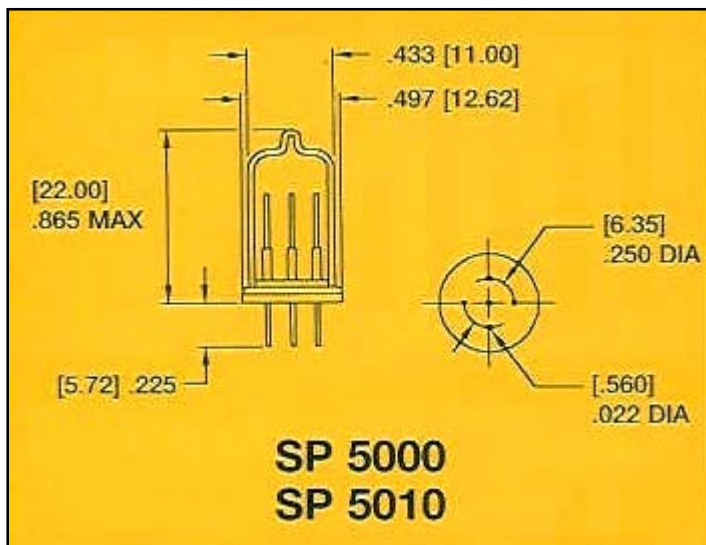
Specifications are subject to change without notice!

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non-corrosive. The conductivity and viscosity can be custom tailored to satisfy widely varied applications.

Physical Dimensions inches (mm)



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