

抵抗温度係数が優れた1回転型巻線トリマ

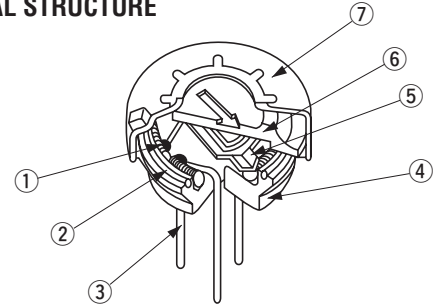
1回転型巻線トリマ SINGLE TURN WIREWOUND TRIMMERS

λ-6/λ-13

RoHS 指令対応 RoHS compliant



内部構造図
INTERNAL STRUCTURE
λ-13T



名称 Part name	材料 Material	燃焼性 Flammability
① 抵抗体 Resistive element	—	—
② Oリング “O” ring	シリコンゴム Silicone rubber	UL-94HB
③ 端子 Terminal pin	ニッケル、金めっき Nickel, Gold-plated	—
④ ベース Base	DAP	UL-94HB
⑤ ワイパ Wiper	銅合金、パラジウムめっき Copper alloy, Palladium-plated	—
⑥ ホイール Wheel	POM (ポリオキシメチレン) Polyoxymethylene	UL-94HB
⑦ カバー Cover	ステンレス Stainless steel	—

■特長 FEATURES

- 抵抗温度係数が小さい
- ワイパの接触抵抗が小さい
- Low temperature coefficient of resistance
- Low contact resistance

■型式表示 PART NUMBER DESIGNATION

λ - 6 T 10 Ω
(1 1 0 6)

シリーズ名 Series name

λ-6 : φ 6.6 mm λ-13 : φ 13.5 mm
(1106) (1113)

※ () 内型式名は輸出用型式名です。
“λ” may be replaced by 11 for type writing conveniences.

製品形状 Product shape

T : 上面調整 Top adjustment	TR : つまみ付き上面調整 Top adjustment with knob
S : 側面調整 Side adjustment	SR : つまみ付き側面調整 Side adjustment with knob
F : 裏面調整 Rear adjustment	FR : つまみ付き裏面調整 Rear adjustment with knob
B : パネル実装 Panel mount	

抵抗値 Resistance value

※ご注文に際しては、型式一覧表をご確認ください。
Please refer to the LIST OF PART NUMBERS when placing orders.

仕様が改善のために変更されることがありますので、ご発注の際は仕様をご確認ください。当カタログは参考仕様ですので、ご使用に際しては納入仕様書等の取り交わしをお願い致します。
Specifications are subject to change without notice. Specifications in this catalog are for reference. The formal specification sheets will be submitted upon request.

■型式一覧表 LIST OF PART NUMBERS

〈公称抵抗値 Nominal resistance values〉

調整方向 Adjustment position	寸法 Dimension	
	φ 6.6 mm	φ 13.5 mm
上面調整 Top adjustment	λ-6T (1106T)	λ-13T (1113T)
上面調整(つまみ付き) Top adjustment with knob		λ-13TR (1113TR)
側面調整 Side adjustment	λ-6S (1106S)	λ-13S (1113S)
側面調整(つまみ付き) Side adjustment with knob		λ-13SR (1113SR)
パネル実装 Panel mount	λ-6B (1106B)	λ-13B (1113B)
裏面調整 Rear adjustment	λ-6F (1106F)	λ-13F (1113F)
裏面調整(つまみ付き) Rear adjustment with knob		λ-13FR (1113FR)

☐: 製作不可能 Not manufactured

※ご注文に際しては、〈公称抵抗値〉(Fig. 1)をご確認ください。

※Verify the above part numbers <Nominal resistance values> (Fig. 1) when placing orders.

	λ-6 (1106)				λ-13 (1113)						
	T	S	B	F	T	TR	S	SR	B	F	FR
10 Ω	●	●	☞●	☞●	●	☞●	●	☞●	●	☞●	☞●
20 Ω	●	●	☞●	☞●	●	☞●	●	☞●	●	☞●	☞●
50 Ω	●	●	☞●	●	●	☞●	●	☞●	●	☞●	☞●
100 Ω	●	●	●	●	●	●	●	●	●	☞●	☞●
200 Ω	●	●	●	●	●	●	●	☞●	●	●	☞●
500 Ω	●	●	●	●	●	●	●	☞●	●	●	●
1 kΩ	●	●	●	●	●	●	●	●	●	●	☞●
2 kΩ	●	●	●	●	●	●	●	●	●	●	☞●
5 kΩ	●	●	●	●	●	●	●	●	●	●	●
10 kΩ	●	●	●	●	●	●	●	●	●	●	●
20 kΩ	●	●	●	●	●	●	●	●	●	●	●
25 kΩ					●	●	●	●	●	●	●
30 kΩ	●	●	●	●							
50 kΩ					●	●	●	●	●	☞●	●
100 kΩ					●	●	●	●	●	●	●

Fig. 1

☞印の型式、公称抵抗値は受注生産となります。

The products indicated by ☞ mark are manufactured upon receipt of order basis.

■電気的特性
ELECTRICAL CHARACTERISTICS

	λ-6 (1106)	λ-13 (1113)
公称抵抗値範囲 Nominal resistance range	10 Ω ~ 30 kΩ	10 Ω ~ 100 kΩ
抵抗値許容差 Resistance tolerance	± 10 %	
定格電力 Power rating ※1	0.37 W (70 °C) 0 W (120 °C)	0.75 W (70 °C) 0 W (120 °C)
電気的変化 Electrical continuity	機械的回転角度以内 Continuous for full mechanical range	
残留抵抗値 End resistance	2 %又は1 Ωの何れか大きい方以下 2 % or 1 Ω, whichever is greater	
分解度 Resolution	1.42 ~ 0.14 %	1.07 ~ 0.08 %
摺動ノイズ Peak noise	100 Ω (ENR) maximum	
使用温度範囲 Operating temp. range	-55 ~ 120 °C	
抵抗温度係数 Temp. coefficient	± 50 10 ⁻⁶ /°C maximum	
絶縁抵抗 Insulation resistance	1000 MΩ minimum (DC500 V)	
絶縁耐圧 Dielectric strength	900 Vrms, 1 min (Room conditions)	
質量 Net weight	Approx. 0.34 g (λ-6T) Approx. 0.47 g (λ-6S) Approx. 1.41 g (λ-6B) Approx. 0.39 g (λ-6F)	Approx. 1.60 g (λ-13T) Approx. 2.59 g (λ-13S) Approx. 5.16 g (λ-13B) Approx. 1.73 g (λ-13TR) Approx. 2.72 g (λ-13SR) Approx. 1.86 g (λ-13F) Approx. 1.93 g (λ-13FR)

■機械的特性
MECHANICAL CHARACTERISTICS

	λ-6 (1106)	λ-13 (1113)
機械的回転角度 Mechanical angle	310 ° (1 turn)	
回転トルク Operating torque	7.85 mN·m {80 gf·cm} maximum	19.61 mN·m {200 gf·cm} maximum
回転止強度 Stop strength	49.04 mN·m {500 gf·cm} minimum	98.07 mN·m {1 kgf·cm} minimum
回転寿命 Rotational life	200 cycles [ΔR/R ≤ 2 %]	
端子強度 Terminal strength	8.89 N {907 gf} minimum (引張り強さ Tensile strength MIL-R-27208)	

{ } : 参考値 Reference only

※1 定格電力について、抵抗値により最大入力電圧(V)及び最大ワイバ電流(mA)が規定されています。

Rated power is given for the maximum input voltage (V) and maximum wiper current (mA) for the resistance value.

■環境特性
ENVIRONMENTAL CHARACTERISTICS

(MIL-R-27208に準拠 In accordance with MIL-R-27208)

試験項目 Test item	試験条件 Test conditions	仕様 Specifications
熱衝撃 Thermal shock	-65 ~ 125 °C, 5 cycles	[$\Delta R/R \leq 1\% + 0.05\Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
耐湿性 Humidity	相対湿度 80 ~ 98 %, 240 h	[$\Delta R/R \leq 1\% + 0.05\Omega$]
耐衝撃性 Shock	981 m/s ²	[$\Delta R/R \leq 1\% + 0.05\Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
耐振動性 Vibration	加速度 (Acceleration) 196 m/s ² , 10 ~ 2000 Hz	[$\Delta R/R \leq 1\% + 0.05\Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
負荷寿命 Load life	70 °C 定格負荷 (Full load), 1000 h	[$\Delta R/R \leq 2\%$] [S.S. $\leq 2\% + \text{Resolution}$]
低温動作 Low temp. operation	-55 °C, 2 h	[$\Delta R/R \leq 1\% + 0.05\Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
高温放置 High temp. exposure	120 °C, 250 h	[$\Delta R/R \leq 1\% + 0.05\Omega$] [S.S. $\leq 1\% + \text{Resolution}$]
耐水、密閉性 Immersion seal	85 °C	もれ無し No leaks
塩水噴霧 Salt spray	腐食しないこと No corrosion	—
はんだ耐熱性 Soldering heat	350 °C, 3 s	—

$\Delta R/R$: 全抵抗値変化 Change in total resistance
S.S. : 設定安定度 Setting stability

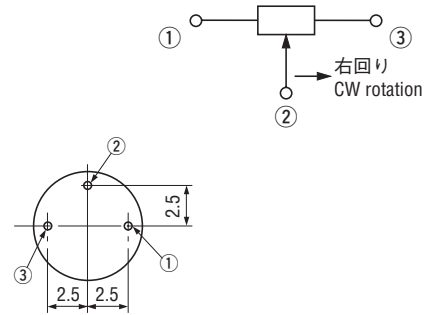
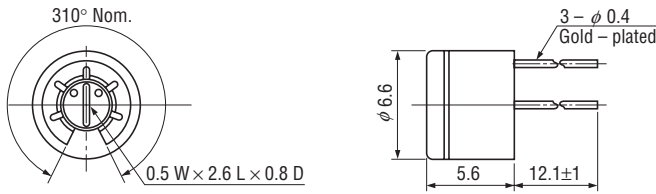
■分解度特性
RESOLUTION CHARACTERISTICS

公称抵抗値 Nominal resistance values (Ω)	分解度 Resolution (%)	
	λ-6 (1106)	λ-13 (1113)
10	1.42	1.07
20	1.14	0.83
50	0.91	0.71
100	0.74	0.57
200	0.56	0.42
500	0.54	0.35
1 k	0.48	0.40
2 k	0.34	0.27
5 k	0.28	0.20
10 k	0.22	0.19
20 k	0.17	0.12
25 k	—	0.11
30 k	0.14	—
50 k	—	0.10
100 k	—	0.08

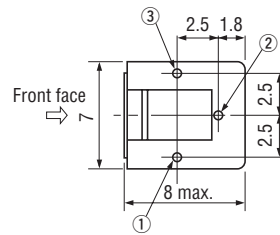
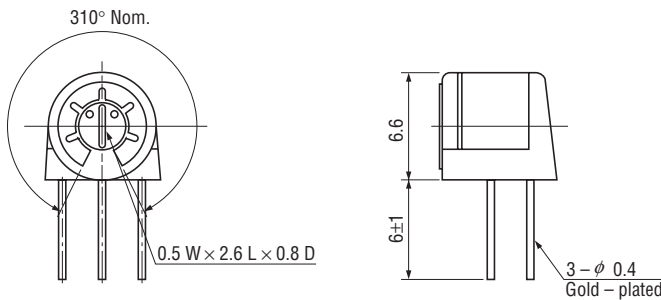
■外形寸法図 OUTLINE DIMENSIONS

Unless otherwise specified, tolerance : ± 0.2 (Unit : mm)

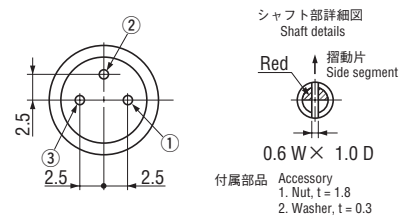
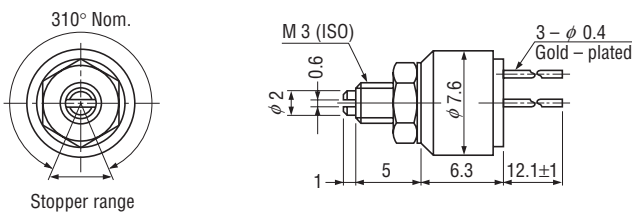
● λ -6T (1106T)
上面調整
Top adjustment



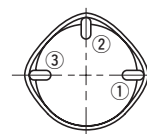
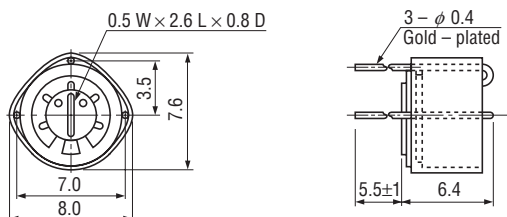
● λ -6S (1106S)
側面調整
Side adjustment



● λ -6B (1106B)
パネル実装
Panel mount



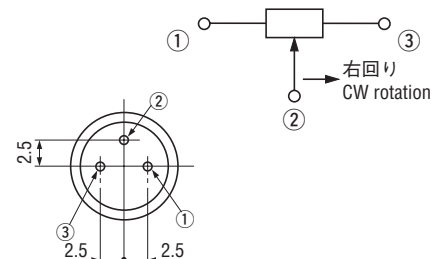
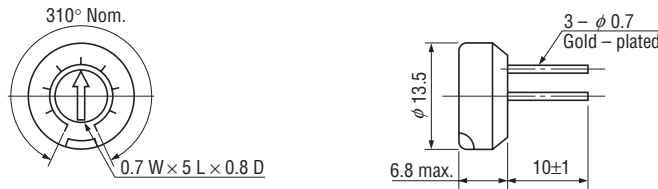
● λ -6F (1106F)
裏面調整
Rear adjustment



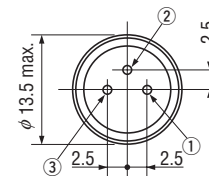
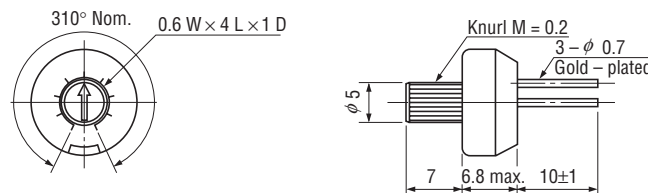
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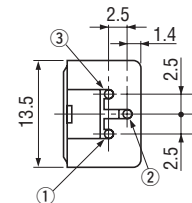
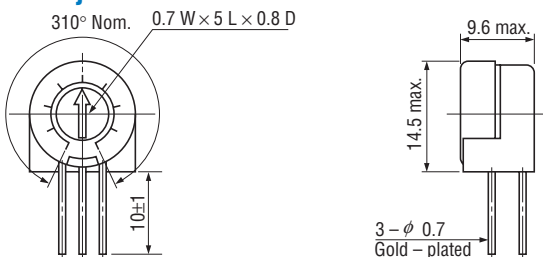
● λ -13T (1113T)
上面調整 Top adjustment



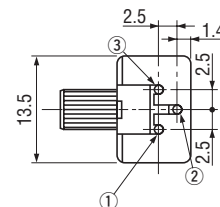
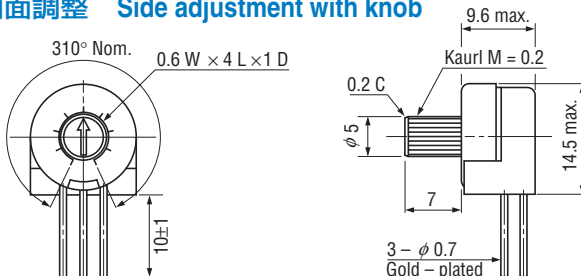
● λ -13TR (1113TR)
つまみ付き上面調整 Top adjustment with knob



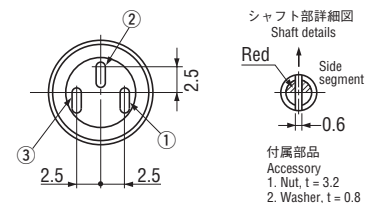
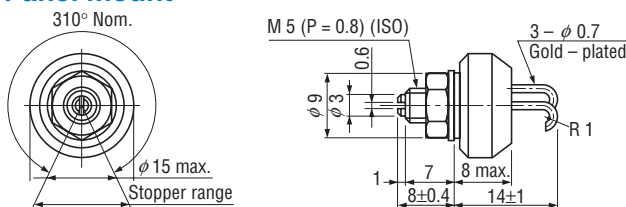
● λ -13S (1113S)
側面調整 Side adjustment



● λ -13SR (1113SR)
つまみ付き側面調整 Side adjustment with knob



● λ -13B (1113B)
パネル実装 Panel mount

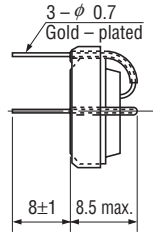
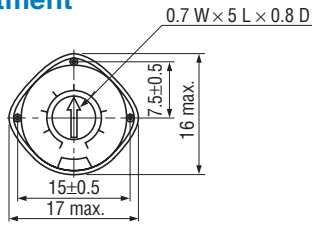


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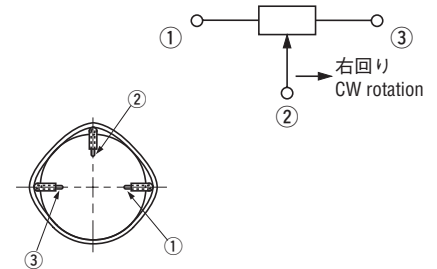
● λ -13F (1113F)

裏面調整

Rear adjustment



Unless otherwise specified, tolerance : ± 0.2 (Unit : mm)



● λ -13FR (1113FR)

つまみ付き裏面調整

Rear adjustment with knob

