



Oshino Lamps Ltd.

Sub Miniature Lamps Product Catalog

迷你灯泡
产品目录



株式会社 押野電気製作所

Established in 1931

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关于小型真空灯泡（迷你灯泡/SML）（1/7）

对使用钨丝的小型真空灯泡（=SML : Sub-Miniature-Lamp）进行说明。
能为各位在使用SML时起到帮助是我们的荣幸。

I. SML 的大小和名称

在我司我们把T型(管型)的小型真空灯泡叫做SML，大小（直径）是2.3~7.0mm。

SML是由玻璃罩的大小（直径）来表示，如T-1、T-1 ¼ 等。

T-1表示1/8inch，各式大小按以下的计算公式求得。

例) T-1 = 1/8inch = 25.4mm x 1/8 = 3.175mm → 灯泡直径3.05mm的通称





T-1 ¼ = 1/8inch x 5/4 = 25.4mm x 1/8 x 5/4 ≒ 3.969mm → 灯泡直径4.1mm的通称

通称和大小的关系如下。

T-3/4	T-1	T-1 ¼	T-1 ½	T-1 ¾	T-6.5
2.26mm	3.05mm	4.10mm	4.70mm	4.70mm 5.30mm	6.50mm

II. 构成SML的部件

构成SML的主要部件是，①导线（Wire Terminal）、②底座/金属盖、
③树脂灯罩（Silicone Rubber Boots）这三种。

【导线】		
【底座/金属盖】		
【树脂灯罩】		

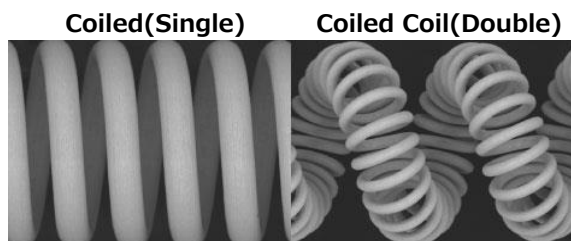
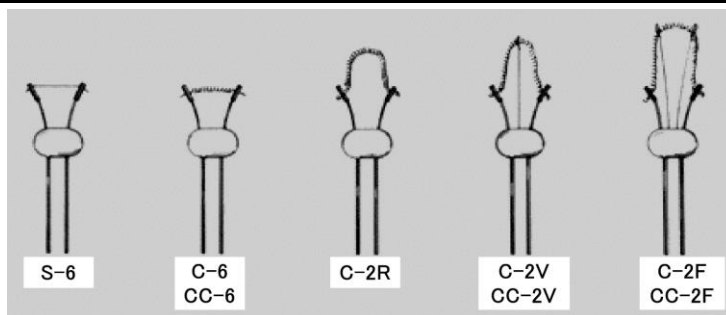
关于小型真空灯泡（迷你灯泡/SML）（2/7）

III. 灯丝的种类与形状

我司制造的SML的钨丝形状是基于JIS C 7711（真空灯泡钨丝接线方式的表示）。

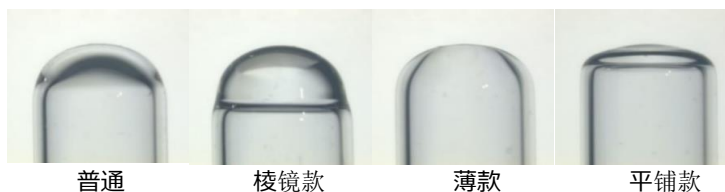
【钨丝形状/Filament Shape】

Mounting Shape \ Coiling	C	CC	S
	Coiled (Single)	CoiledCoil (Double)	Straight (Uncoiled)
6 (Straight Shape)	C-6	CC-6	S-6
2V (Single Hanger)	C-2V	CC-2V	
2F (Double Hanger)	C-2F	CC-2V	
2R (Round Shape)	C-2R		



IV. 玻璃罩的形状

配合SML的光学特性有多种形状。

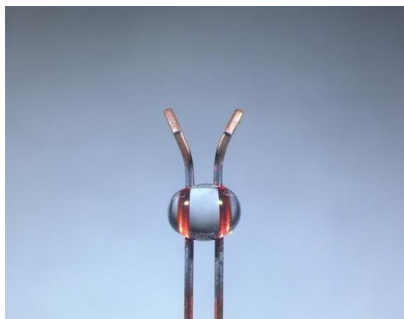


关于小型真空灯泡（迷你灯泡/SML）（3/7）

V. 灯丝的制造过程

① 灯芯柱的烧成

金属线和玻璃熔接，做成灯芯柱。



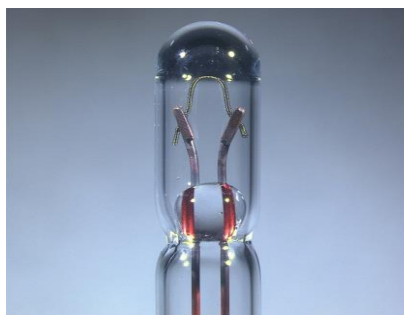
② 钨丝的接线

金属线的一端与钨丝连接，构形。



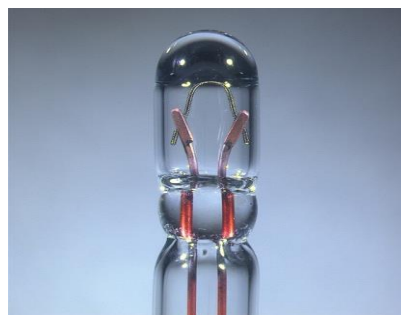
③ 插入玻璃管~排气

将与钨丝接线的灯芯柱插入玻璃管内，用排气机把玻璃管内的空气抽出达到真空状态。



④ 密封

用燃烧炉将金属线和玻璃罩熔接，灯泡导线也就出来了。



VI. 底座/金属盖的种类

底座/金属盖指的是，覆盖SML电极部分的绝缘体。材料是塑料和金属。

塑料·底座			金属·底座
Bi Pin type *面向PCB组装。	Neo-Wedge type *螺纹式。主要面向汽车。可以更换。	SMD type *自动组装对应。	*主要是应用于飞机上的标识灯。可以更换。

关于小型真空灯泡（迷你灯泡/SML）（4/7）

VII. SML 的特性・性质

使用了钨丝的小灯泡、具有一定的设计局限性。

通过理解这方面的设计局限性，便能够对SML的特性更为深层次的理解。

■关于额定电压、额定电流、辉度、寿命的关系

SML特性的基本项目有、①尺寸、②电压、③电流、④辉度、⑤寿命五点。

尺寸以外的特性是在一定的界限中相互影响所产生的关系，这四种特性中，

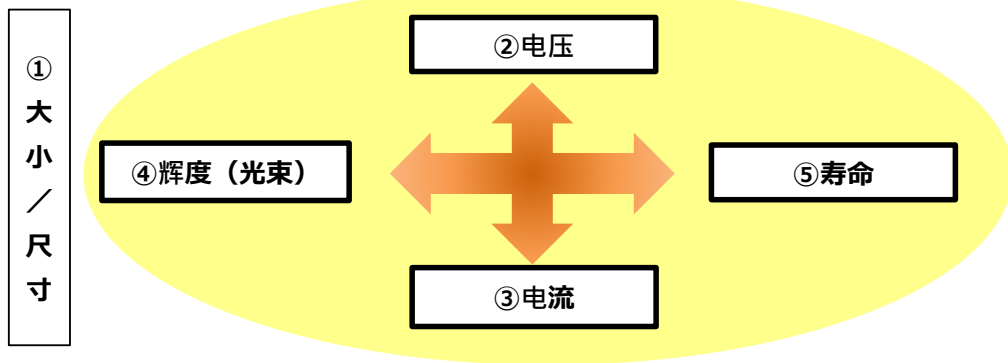
只要确定3种，剩下的一种就可以自动确定。换言之，4种要素中，

具有无法做到只改变一种的特点。

想要提高辉度的情况下、电压、电流、寿命保持不变的话就无法提高辉度。

剩余三种特性或者最低一种需要进行变更。

【决定SML特性的五种要素】



下面是对这4中特性内，特别是重要的④辉度(光束)和⑤寿命的关系进行说明。

■亮度和寿命的关系性

最影响SML的寿命的特性是发光效率（MSCP/Watt）。另外，还需考虑钨丝的色温。

如下，表1是通过同等大小（T-1 ¾）的设计电压为28V的具有代表性的4种SML特性和钨丝的规格。

※假设 OL-1764 作为基本规格型号，和其他的三种 SML 作对比。

表1. T-1 ¾size 28V产品

P/N.	电流 (A)	功率 (W)	辉度 MSCP (cd)	发光效率 (MSCP/W)	寿命 (Hours)	色温 (K)	钨丝线径 (µm)	钨丝长 (mm)
OL-1764	0.04	1.12	0.34	0.306	4,000	2,200	11.24	104.0
OL-2187	0.04	1.12	0.30	0.270	7,000	2,075	11.78	121.5
OL-2185	0.04	1.12	0.20	0.180	25,000	1,925	12.62	146.0
OL-1764LSV	0.06	1.68	0.34	0.201	25,000	2,125	15.54	151.0

※关于辉度/MSCP、寿命，请参照下面一页之后的专门用语说明。

※参照下一页。

关于小型真空灯泡（迷你灯泡/SML）（5/7）

VII. SML 的特性・性质（续）

■ 辉度和寿命的关系性（续）

比较(1) OL-2187 / OL-2185

OL-2187和OL-2185两种SML和OL-1764有同样的电功率(W)，每款都是在设计上将辉度调低。随着钨丝长度比OL-1764的延长，辉度和色温降低，发光效率也变低。

因为发光效率降低，钨丝的蒸发速度变慢，寿命延长。

而且，OL-2185和OL-2187作比较，在辉度和色温方面，OL-2185比OL-2187设计的更低。因为发光效率低下，寿命会随之延长，但是辉度・色温是较低的，在用于照明的时候，是否能达到自己想要的亮度预期值是需要注意的。

比较(2) OL-1764LSV

OL-1764LSV和OL-1764保持了同一辉度，以长寿命为目标所设计的一款SML。它比OL-1764的钨丝线更长更粗。辉度和色温变高的情况下发光效率也会提高。但是寿命会缩短。为了让缩短的寿命延长，之后将钨丝线拉长使得发光效率变低。为了得到和OL-1764同样的辉度需要将钨丝线延长，那么随着电阻值的增加，伴随的功率也会增加，发光效率（MSCP/Watt）就会下降。

如果将灯丝线加厚加长，调整到相同的辉度，虽然可以获得长寿命，但由于发光效率低，所以功耗会变大。

相信通过比较这4种SML，您能理解在有尺寸的限制的情况下，控制灯丝线长度和线径，辉度、功耗和寿命相互影响的特性。

※1) 固定用语解说：辉度

在SML上施加额定电压时灯丝发光得到的光量。

通常，SML的亮度由平均球面辉度/MSCP(Mean Spherical Candle Power)和光束表示。

※2 固定用语解说：平均球面辉度/MSCP

平均球面辉度/MSCP是指、这是指放置在具有一定规格内径的球体中心的SML发出的辉度的平均值。

平均球面辉度/MSCP的说法在MIL规格等上面也被广泛使用。

而且平均球面辉度/MSCP，通过以下公式可以转换为全光束：

$$\text{※ 全光束/流明 (lm)} = \text{MSCP} \times 4\pi$$

关于小型真空灯泡（迷你灯泡/SML）（6/7）

Ⅶ. SML的特性・性质（续）

※1) 补充说明： SML的寿命

我司对于SML的寿命的定义如下说明。

一般将寿命结束的SML称「耗尽」了，这个表示灯泡内部的钨丝发生断线无法发光的状态。那么钨丝的断线是因何而起呢？

灯泡是一种通过电能对钨丝进行加热利用其发出来的光的发光装置。

熔点在3,387度的钨丝，点灯时的温度到达1,800℃~2,000℃，投入的能量大约85%都转化为热能消耗完了，剩下的都变成了光。灯泡内部为了不让钨丝燃烧因此形成了真空环境。随着点灯钨丝逐渐蒸发。

根据发光时间，钨丝慢慢变细，到最后断线，寿命终了。

※2) 补充说明： 平均寿命时间

我们对平均寿命时间的定义是指一半样品断线的时间点。

寿命测量是在保持恒定温度的室内，不会对灯泡施加振动或冲击的环境下进行的。

而且施加到SML的电压控制在±1%或更小的波动范围内。

由于SML的长丝是将极细的钨丝卷成线圈状，所以寿命末期的长丝变得非常细，在轻微的振动和冲击下很容易断线。

另外，寿命时间的测量都是用交流电流点亮的时间，使用直流电流时，寿命可能会缩短到约50%或更低的时间。

※) 参考： 加入气体的灯泡

为了抑制灯丝蒸发对灯的寿命的较大影响，

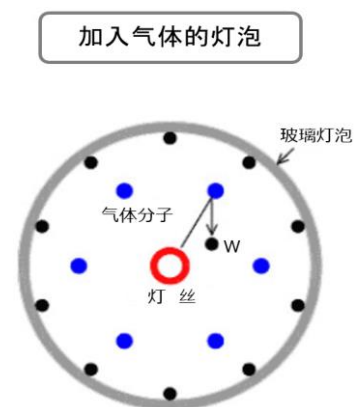
在玻璃灯泡内，密封了惰性气体(氩：Ar，氪：Kr，氙：Xe)等。

通过注入密封惰性气体，抑制了钨丝的蒸发，

结果上使灯泡的寿命延长。

另外，通过抑制钨丝蒸发的效果，使得大流量的电流能够流入，能得到比SML(小型真空钨丝灯泡)更高的色温以及更高的发光效率。

我司同时也制作含惰性气体的灯泡，如果有需要可以随时咨询。



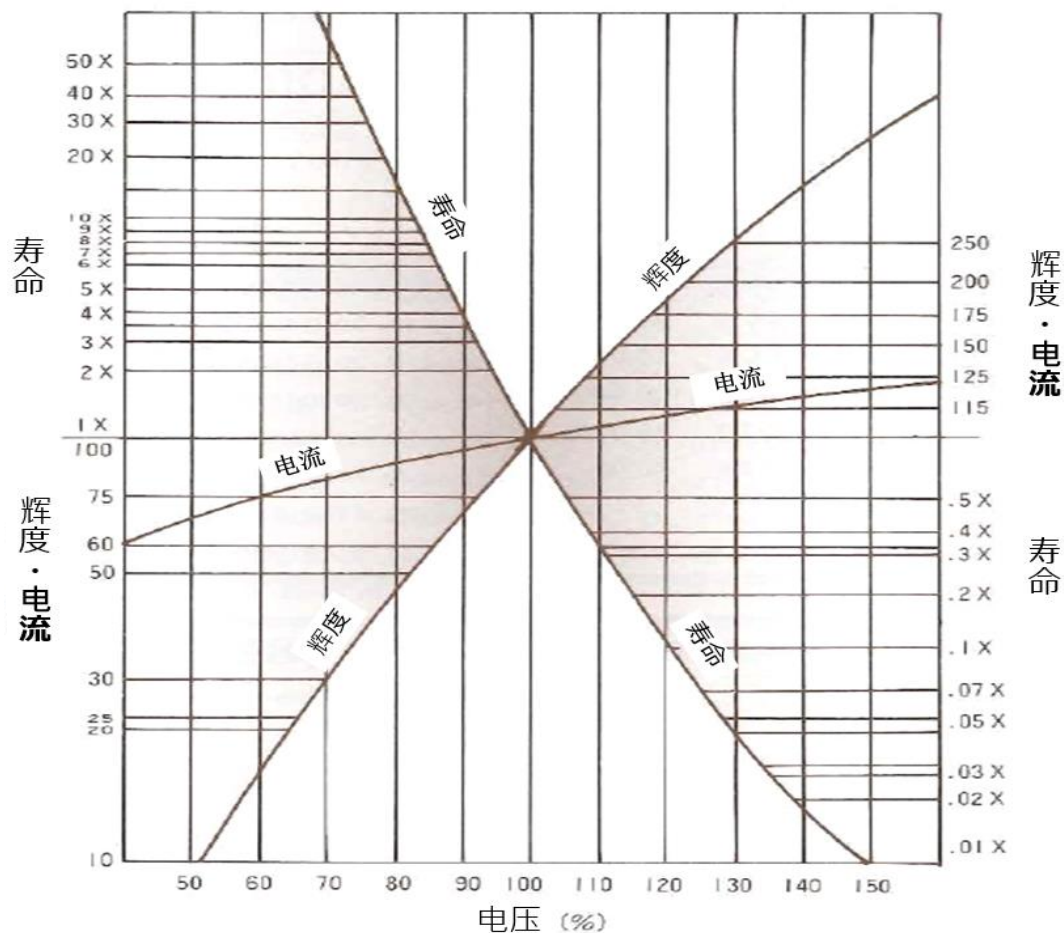
关于小型真空灯泡（迷你灯泡/SML）（7/7）

Ⅶ. SML 的特性·性质（续）

■关于过电压/低电压情况下的使用

对于SML的设计电压来说，使用过电压或低电压时电流·辉度·寿命的变化如下图所示的关系所示。

【过电压/低电压时的规格关联图】



※注释

此图的变化会因SML不同产生较大的差异。此图电压：90~110%
只有平均寿命在5,000h以下的SML适用。

■关于SML的发热和周围温度

SML会因为功率、发光效率等变得不同，就设定电压做连续电灯的情况，灯泡表面温度大约会到60℃~100℃。将SML置于密闭的环境下使用时，周围温度会变得非常高，会对SML的性能产生明显的影响。

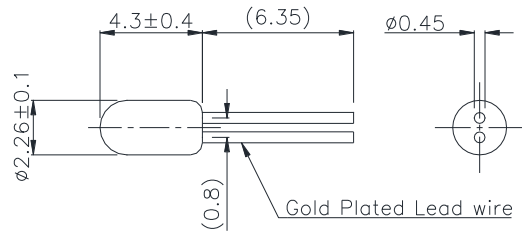
T-3/4 IBP

T-3/4IBPS

Pin Spacing 0.8mm

Maximum Length
4.7mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-2404IBPS	5.0	0.020	0.02	CC-6
OL-2400IBPS	5.0	0.021	0.034	CC-6
OL-6833IBPS	5.0	0.060	0.05	C-2R
OL-7133IBPS	5.0	0.075	0.09	C-2R
OL-7153IBPS	5.0	0.115	0.15	C-2R

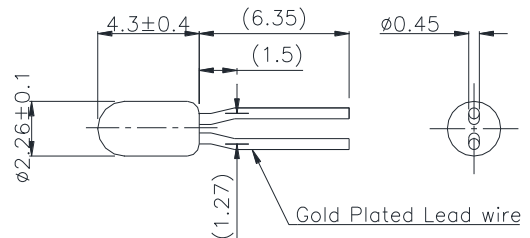


T-3/4IBPS (Type-A)

Pin Spacing 1.27mm

Maximum Length
4.7mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-2404IBPS/A	5.0	0.020	0.02	CC-6
OL-2400IBPS/A	5.0	0.021	0.034	CC-6
OL-6833IBPS/A	5.0	0.060	0.05	C-2R
OL-7133IBPS/A	5.0	0.075	0.09	C-2R
OL-7153IBPS/A	5.0	0.115	0.15	C-2R

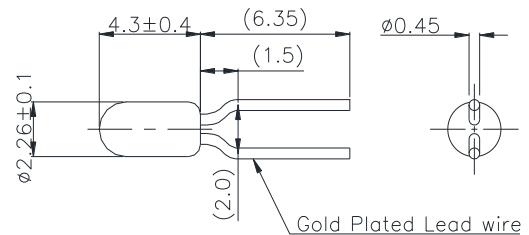


T-3/4IBPS (Type-G)

Pin Spacing 2.0mm

Maximum Length
4.7mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-2404IBPS/G	5.0	0.020	0.02	CC-6
OL-2400IBPS/G	5.0	0.021	0.034	CC-6
OL-6833IBPS/G	5.0	0.060	0.05	C-2R
OL-7133IBPS/G	5.0	0.075	0.09	C-2R
OL-7153IBPS/G	5.0	0.115	0.15	C-2R



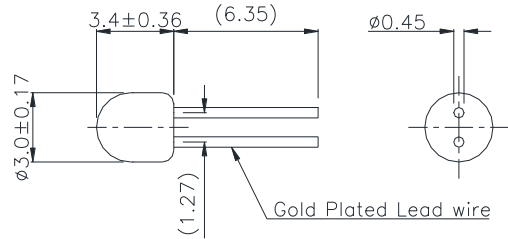
T-1 Short IBP

T-1 Short IBP (Type-A)

Pin Spacing 1.27mm

Maximum Length
3.76mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-30432IBP/A	5.0	0.020	0.02	C-2R
OL-30192IBP/A	5.0	0.021	0.034	C-2R
OL-30702IBP/A	5.0	0.060	0.15	C-2R
OL-6832IBP/A	5.0	0.060	0.05	C-2R
OL-7132IBP/A	5.0	0.075	0.09	C-2R
OL-7152IBP/A	5.0	0.115	0.15	C-2R
OL-8552IBP/A *	28.0	0.020	0.15	CC-2F



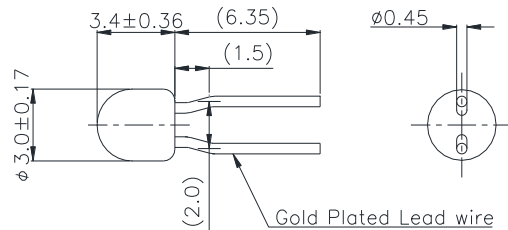
*Maximum length 4.06mm

T-1 Short IBP (Type-G)

Pin Spacing 2.0mm

Maximum Length
3.76mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-30432IBP/G	5.0	0.020	0.02	C-2R
OL-30192IBP/G	5.0	0.021	0.034	C-2R
OL-30702IBP/G	5.0	0.060	0.15	C-2R
OL-6832IBP/G	5.0	0.060	0.05	C-2R
OL-7132IBP/G	5.0	0.075	0.09	C-2R
OL-7152IBP/G	5.0	0.115	0.15	C-2R
OL-8552IBP/G *	28.0	0.020	0.15	CC-2F



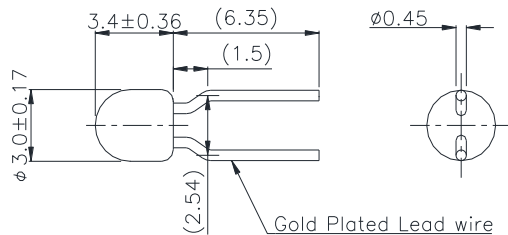
*Maximum length 4.06mm

T-1 Short IBP (Type-E)

Pin Spacing 2.54mm

Maximum Length
3.76mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-30432IBP/E	5.0	0.020	0.02	C-2R
OL-30192IBP/E	5.0	0.021	0.034	C-2R
OL-30702IBP/E	5.0	0.060	0.15	C-2R
OL-6832IBP/E	5.0	0.060	0.05	C-2R
OL-7132IBP/E	5.0	0.075	0.09	C-2R
OL-7152IBP/E	5.0	0.115	0.15	C-2R
OL-8552IBP/E *	28.0	0.020	0.15	CC-2F



*Maximum length 4.06mm

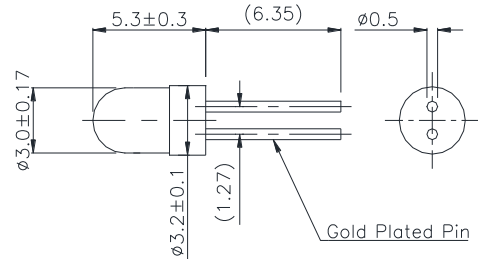
T-1 Short Bi-Pin

T-1 Short BPA

Pin Spacing 1.27mm

Maximum Length
5.6mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-30442BPA	5.0	0.020	0.02	C-2R
OL-30202BPA	5.0	0.021	0.034	C-2R
OL-30712BPA	5.0	0.060	0.15	C-2R
OL-6852BPA	5.0	0.060	0.05	C-2R
OL-7142BPA	5.0	0.075	0.09	C-2R
OL-7182BPA	5.0	0.115	0.15	C-2R
OL-8562BPA	28.0	0.020	0.15	CC-2F

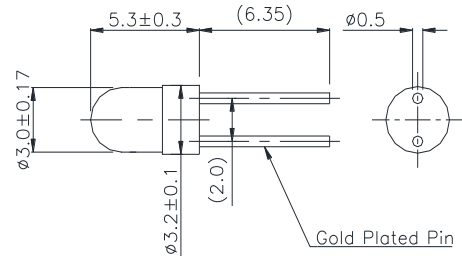


T-1 Short BPG

Pin Spacing 2.0mm

Maximum Length
5.6mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-30442BPG	5.0	0.020	0.02	C-2R
OL-30202BPG	5.0	0.021	0.034	C-2R
OL-30712BPG	5.0	0.060	0.15	C-2R
OL-6852BPG	5.0	0.060	0.05	C-2R
OL-7142BPG	5.0	0.075	0.09	C-2R
OL-7182BPG	5.0	0.115	0.15	C-2R
OL-8562BPG	28.0	0.020	0.15	CC-2F

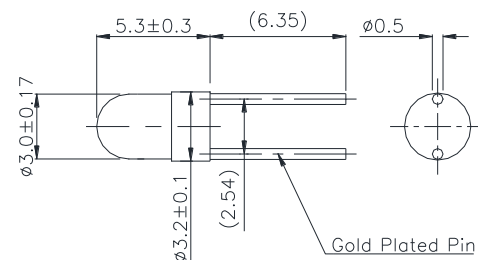


T-1 Short BPE

Pin Spacing 2.54mm

Maximum Length
5.6mm

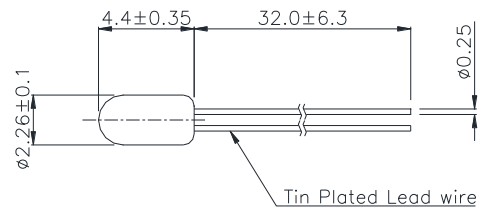
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-30442BPE	5.0	0.020	0.02	C-2R
OL-30202BPE	5.0	0.021	0.034	C-2R
OL-30712BPE	5.0	0.060	0.15	C-2R
OL-6852BPE	5.0	0.060	0.05	C-2R
OL-7142BPE	5.0	0.075	0.09	C-2R
OL-7182BPE	5.0	0.115	0.15	C-2R
OL-8562BPE	28.0	0.020	0.15	CC-2F



T-3/4 Wire Terminal

Standard Bulb Length

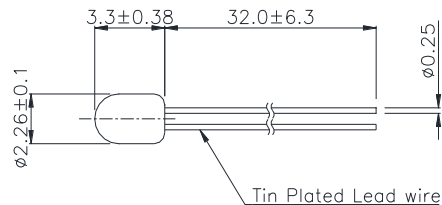
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-2404	5.0	0.020	0.02	CC-6
OL-2400	5.0	0.021	0.034	CC-6
OL-2426	5.0	0.030	0.03	C-2R
OL-2415	5.0	0.040	0.025	C-2R
OL-6803	5.0	0.060	0.03	C-2R
OL-6803AS15*	5.0	0.060	0.03	C-2R
OL-6833	5.0	0.060	0.05	C-2R
OL-6833AS15*	5.0	0.060	0.05	C-2R
OL-2436	5.0	0.060	0.15	C-2R
OL-7133	5.0	0.075	0.09	C-2R
OL-7133AS15*	5.0	0.075	0.09	C-2R
OL-7153	5.0	0.115	0.15	C-2R
OL-7153AS15*	5.0	0.115	0.15	C-2R
OL-2449	5.0	0.115	0.2	C-2R
OL-2411	5.0	0.125	0.22	C-2R



*U.S Military Standard MS90452

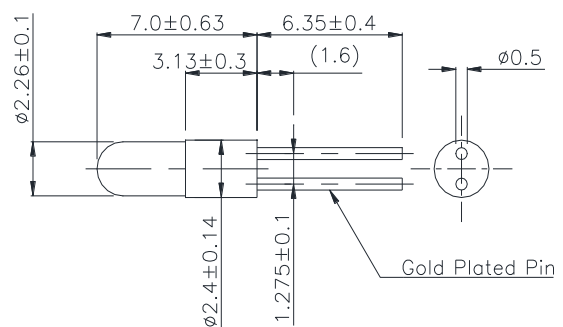
Short Bulb Length

OL-24042	5.0	0.020	0.02	CC-6
OL-68032	5.0	0.060	0.03	C-2R
OL-68332	5.0	0.060	0.05	C-2R
OL-24362	5.0	0.060	0.15	C-2R
OL-71332	5.0	0.075	0.09	C-2R
OL-71532	5.0	0.115	0.15	C-2R
OL-24112	5.0	0.125	0.22	C-2R



T-3/4 Bi-Pin

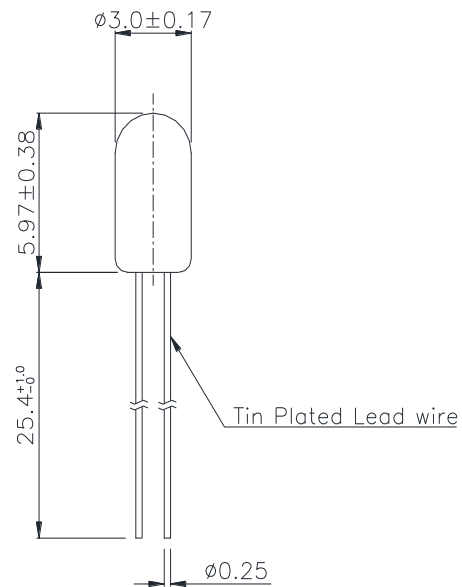
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-2405BP	5.0	0.020	0.02	CC-6
OL-2401BP	5.0	0.021	0.034	CC-6
OL-2427BP	5.0	0.030	0.03	C-2R
OL-2416BP	5.0	0.040	0.025	C-2R
OL-8587BP	5.0	0.060	0.03	C-2R
OL-8913BP	5.0	0.060	0.05	C-2R
OL-2437BP	5.0	0.060	0.15	C-2R
OL-8828BP	5.0	0.075	0.09	C-2R
OL-8270BP	5.0	0.115	0.15	C-2R



T-1 Wire Terminal

Standard Bulb Length

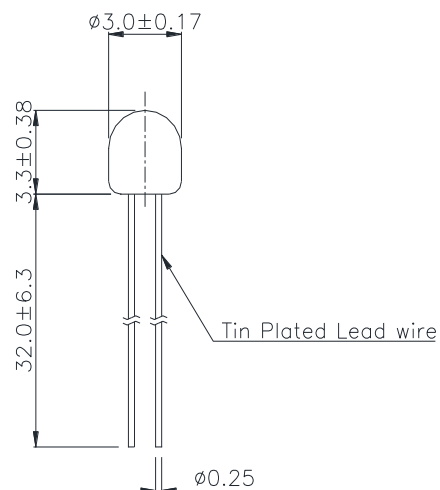
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3037	3.0	0.040	0.03	C-2R
OL-3010	3.0	0.060	0.03	C-2R
OL-3043	5.0	0.020	0.02	C-2R
OL-3019	5.0	0.021	0.034	C-2R
OL-3056	5.0	0.030	0.03	C-2R
OL-3009	5.0	0.040	0.025	C-2R
OL-680*	5.0	0.060	0.03	C-2R
OL-680AS15*	5.0	0.060	0.03	C-2R
OL-683*	5.0	0.060	0.05	C-2R
OL-683AS15*	5.0	0.060	0.05	C-2R
OL-3070	5.0	0.060	0.15	C-2R
OL-713*	5.0	0.075	0.09	C-2R
OL-713AS15*	5.0	0.075	0.09	C-2R
OL-715*	5.0	0.115	0.15	C-2R
OL-715AS15*	5.0	0.115	0.15	C-2R
OL-715F1	5.0	0.125	0.22	C-2R
OL-3093	6.0	0.040	0.04	C-2R
OL-3041	6.0	0.060	0.13	C-2R
OL-1088	10.0	0.027	0.09	C-2F
OL-3023	12.0	0.030	0.1	C-2F
OL-1089	12.0	0.060	0.15	C-2F
OL-3228	14.0	0.040	0.15	C-2F
OL-1111	14.0	0.065	0.15	C-2F
OL-1092	18.0	0.026	0.15	C-2F
OL-3091	28.0	0.020	0.05	C-2F
OL-6838	28.0	0.024	0.15	C-2F



*U.S Military Standard MS24367

Short Bulb Length

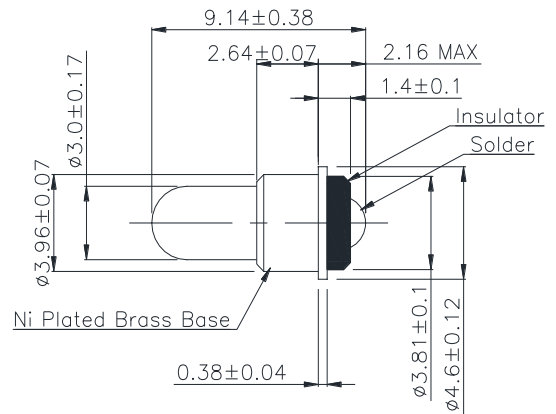
OL-6802	5.0	0.060	0.03	C-2R
OL-6802AS15**	5.0	0.060	0.03	C-2R
OL-6832	5.0	0.060	0.05	C-2R
OL-6832AS15**	5.0	0.060	0.05	C-2R
OL-30702	5.0	0.060	0.15	C-2R
OL-7132	5.0	0.075	0.09	C-2R
OL-7132AS15**	5.0	0.075	0.09	C-2R
OL-7152	5.0	0.115	0.15	C-2R
OL-7152AS15**	5.0	0.115	0.15	C-2R
OL-7152F1	5.0	0.125	0.22	C-2R
OL-8552	28.0	0.020	0.15	CC-2F



**U.S Military Standard MS90451

T-1 Sub-Midget Flanged

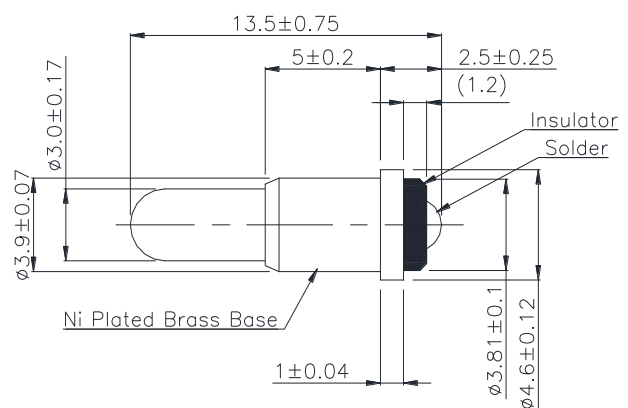
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3038	3.0	0.040	0.03	C-2R
OL-3008	3.0	0.060	0.03	C-2R
OL-3044	5.0	0.020	0.02	C-2R
OL-3020	5.0	0.021	0.034	C-2R
OL-3057	5.0	0.030	0.03	C-2R
OL-3007	5.0	0.040	0.025	C-2R
OL-682*	5.0	0.060	0.03	C-2R
OL-682AS15*	5.0	0.060	0.03	C-2R
OL-685*	5.0	0.060	0.05	C-2R
OL-685AS15*	5.0	0.060	0.05	C-2R
OL-3071	5.0	0.060	0.15	C-2R
OL-714*	5.0	0.075	0.09	C-2R
OL-714AS15*	5.0	0.075	0.09	C-2R
OL-718*	5.0	0.115	0.15	C-2R
OL-718AS15*	5.0	0.115	0.15	C-2R
OL-718F1	5.0	0.125	0.22	C-2R
OL-3094	6.0	0.040	0.04	C-2R
OL-3042	6.0	0.060	0.13	C-2R
OL-1098	10.0	0.027	0.09	C-2F
OL-3024	12.0	0.030	0.1	C-2F
OL-1099	12.0	0.060	0.15	C-2F
OL-3229	14.0	0.040	0.15	C-2F
OL-1112	14.0	0.065	0.15	C-2F
OL-1100	18.0	0.026	0.15	C-2F
OL-3092	28.0	0.020	0.05	CC-2F
OL-6839	28.0	0.024	0.15	CC-2F



*U.S Military Standard MS24515

French Norm

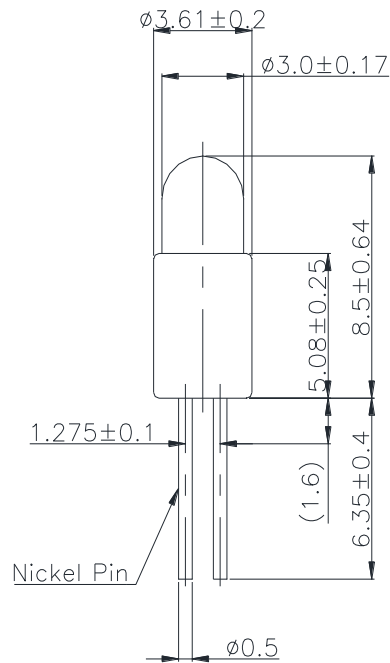
OL-3104	5.0	0.060	0.05	C-2R
OL-3106	5.0	0.115	0.15	C-2R
OL-3109	12.0	0.060	0.15	C-2F
OL-3111	18.0	0.026	0.15	C-2F
OL-3112	28.0	0.024	0.15	CC-2F
OL-3115	28.0	0.040	0.3	CC-2F



T-1 Bi-Pin (Standard)

Maximum Diameter 3.81mm Pin Spacing 1.275mm

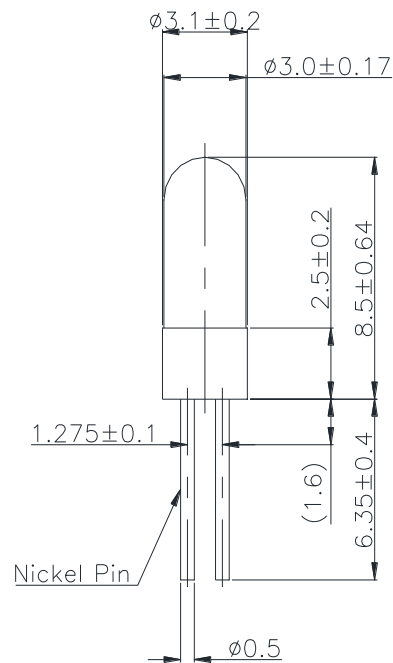
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3038BP	3.0	0.040	0.03	C-2R
OL-3008BP	3.0	0.060	0.03	C-2R
OL-3044BP	5.0	0.020	0.02	C-2R
OL-3020BP	5.0	0.021	0.034	C-2R
OL-3057BP	5.0	0.030	0.03	C-2R
OL-3007BP	5.0	0.040	0.025	C-2R
OL-682BP	5.0	0.060	0.03	C-2R
OL-682BP/AS15	5.0	0.060	0.03	C-2R
OL-685BP	5.0	0.060	0.05	C-2R
OL-685BP/AS15	5.0	0.060	0.05	C-2R
OL-3071BP	5.0	0.060	0.15	C-2R
OL-714BP	5.0	0.075	0.09	C-2R
OL-714BP/AS15	5.0	0.075	0.09	C-2R
OL-718BP	5.0	0.115	0.15	C-2R
OL-718BP/AS15	5.0	0.115	0.15	C-2R
OL-718F1BP	5.0	0.125	0.22	C-2R
OL-3094BP	6.0	0.040	0.04	C-2R
OL-3042BP	6.0	0.060	0.13	C-2R
OL-1098BP	10.0	0.027	0.09	C-2F
OL-3024BP	12.0	0.030	0.1	C-2F
OL-1099BP	12.0	0.060	0.15	C-2F
OL-3229BP	14.0	0.040	0.15	C-2F
OL-1112BP	14.0	0.065	0.15	C-2F
OL-1100BP	18.0	0.026	0.15	C-2F
OL-3092BP	28.0	0.020	0.05	CC-2F
OL-6839BP	28.0	0.024	0.15	CC-2F



T-1 Bi-Pin (Type-A)

Maximum Diameter 3.3mm Pin Spacing 1.275mm

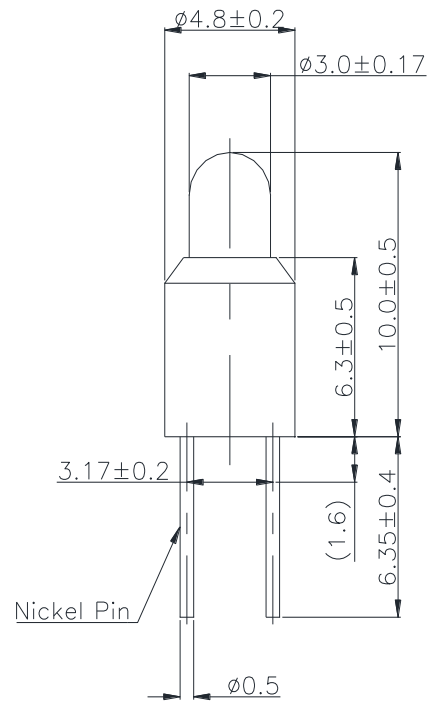
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3038BPA	3.0	0.040	0.03	C-2R
OL-3008BPA	3.0	0.060	0.03	C-2R
OL-3044BPA	5.0	0.020	0.02	C-2R
OL-3020BPA	5.0	0.021	0.034	C-2R
OL-3057BPA	5.0	0.030	0.03	C-2R
OL-3007BPA	5.0	0.040	0.025	C-2R
OL-682BPA	5.0	0.060	0.03	C-2R
OL-682BPA/AS15	5.0	0.060	0.03	C-2R
OL-685BPA	5.0	0.060	0.05	C-2R
OL-685BPA/AS15	5.0	0.060	0.05	C-2R
OL-3071BPA	5.0	0.060	0.15	C-2R
OL-714BPA	5.0	0.075	0.09	C-2R
OL-714BPA/AS15	5.0	0.075	0.09	C-2R
OL-718BPA	5.0	0.115	0.15	C-2R
OL-718BPA/AS15	5.0	0.115	0.15	C-2R
OL-718F1BPA	5.0	0.125	0.22	C-2R
OL-3094BPA	6.0	0.040	0.04	C-2R
OL-3042BPA	6.0	0.060	0.13	C-2R
OL-1098BPA	10.0	0.027	0.09	C-2F
OL-3024BPA	12.0	0.030	0.1	C-2F
OL-1099BPA	12.0	0.060	0.15	C-2F
OL-3229BPA	14.0	0.040	0.15	C-2F
OL-1112BPA	14.0	0.065	0.15	C-2F
OL-1100BPA	18.0	0.026	0.15	C-2F
OL-3092BPA	28.0	0.020	0.05	CC-2F
OL-6839BPA	28.0	0.024	0.15	CC-2F



T-1 Bi-Pin (Type-C)

Maximum Diameter 5mm Pin Spacing 3.17mm

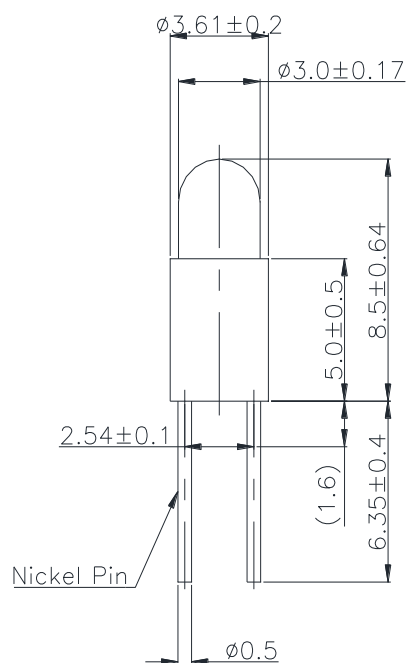
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3038BPC	3.0	0.040	0.03	C-2R
OL-3008BPC	3.0	0.060	0.03	C-2R
OL-3044BPC	5.0	0.020	0.02	CC-6
OL-3020BPC	5.0	0.021	0.034	C-2R
OL-3057BPC	5.0	0.030	0.03	C-2R
OL-3007BPC	5.0	0.040	0.025	C-2R
OL-682BPC	5.0	0.060	0.03	C-2R
OL-682BPC/AS15	5.0	0.060	0.03	C-2R
OL-685BPC	5.0	0.060	0.05	C-2R
OL-685BPC/AS15	5.0	0.060	0.05	C-2R
OL-3071BPC	5.0	0.060	0.15	C-2R
OL-714BPC	5.0	0.075	0.09	C-2R
OL-714BPC/AS15	5.0	0.075	0.09	C-2R
OL-718BPC	5.0	0.115	0.15	C-2R
OL-718BPC/AS15	5.0	0.115	0.15	C-2R
OL-718F1BPC	5.0	0.125	0.22	C-2R
OL-3094BPC	6.0	0.040	0.04	C-2R
OL-3042BPC	6.0	0.060	0.13	C-2R
OL-1098BPC	10.0	0.027	0.09	C-2F
OL-3024BPC	12.0	0.030	0.1	C-2F
OL-1099BPC	12.0	0.060	0.15	C-2F
OL-3229BPC	14.0	0.040	0.15	C-2F
OL-1112BPC	14.0	0.065	0.15	C-2F
OL-1100BPC	18.0	0.026	0.15	C-2F
OL-3092BPC	28.0	0.020	0.05	CC-2F
OL-6839BPC	28.0	0.024	0.15	CC-2F



T-1 Bi-Pin (Type-E)

Maximum Diameter 3.81mm Pin Spacing 2.54mm

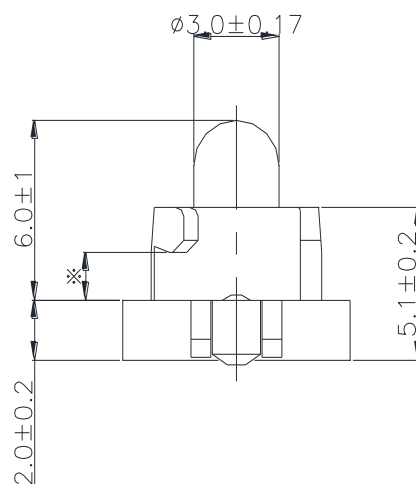
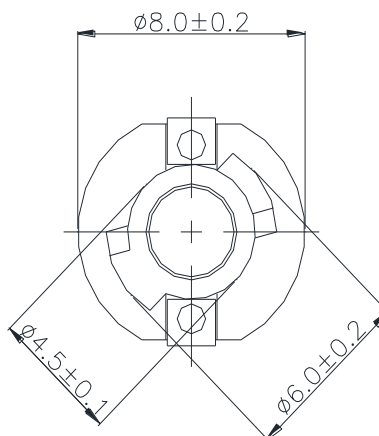
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3038BPE	3.0	0.040	0.03	C-2R
OL-3008BPE	3.0	0.060	0.03	C-2R
OL-3044BPE	5.0	0.020	0.02	CC-6
OL-3020BPE	5.0	0.021	0.034	C-2R
OL-3057BPE	5.0	0.030	0.03	C-2R
OL-3007BPE	5.0	0.040	0.025	C-2R
OL-682BPE	5.0	0.060	0.03	C-2R
OL-682BPE/AS15	5.0	0.060	0.03	C-2R
OL-685BPE	5.0	0.060	0.05	C-2R
OL-685BPE/AS15	5.0	0.060	0.05	C-2R
OL-3071BPE	5.0	0.060	0.15	C-2R
OL-714BPE	5.0	0.075	0.09	C-2R
OL-714BPE/AS15	5.0	0.075	0.09	C-2R
OL-718BPE	5.0	0.115	0.15	C-2R
OL-718BPE/AS15	5.0	0.115	0.15	C-2R
OL-718F1BPE	5.0	0.125	0.22	C-2R
OL-3094BPE	6.0	0.040	0.04	C-2R
OL-3042BPE	6.0	0.060	0.13	C-2R
OL-1098BPE	10.0	0.027	0.09	C-2F
OL-3024BPE	12.0	0.030	0.1	C-2F
OL-1099BPE	12.0	0.060	0.15	C-2F
OL-3229BPE	14.0	0.040	0.15	C-2F
OL-1112BPE	14.0	0.065	0.15	C-2F
OL-1100BPE	18.0	0.026	0.15	C-2F
OL-3092BPE	28.0	0.020	0.05	CC-2F
OL-6839BPE	28.0	0.024	0.15	CC-2F



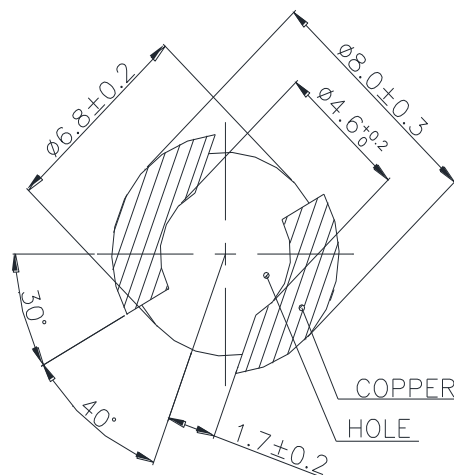
T-1 Neowedge

Base Diameter 8mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-3007NW	5.0	0.040	0.025	C-2R
OL-682NW	5.0	0.060	0.03	C-2R
OL-685NW	5.0	0.060	0.05	C-2R
OL-3071NW	5.0	0.060	0.15	C-2R
OL-714NW	5.0	0.075	0.09	C-2R
OL-718NW	5.0	0.115	0.15	C-2R
OL-718F1NW	5.0	0.125	0.22	C-2R
OL-3094NW	6.0	0.040	0.04	C-2R
OL-3042NW	6.0	0.060	0.13	C-2R
OL-1098NW	10.0	0.027	0.09	C-2F
OL-3024NW	12.0	0.030	0.1	C-2F
OL-1099NW	12.0	0.060	0.15	C-2F
OL-3507NW	12.0	0.060	0.2	C-2F
OL-3480NW	14.0	0.040	0.05	C-2F
OL-3229NW	14.0	0.040	0.15	C-2F
OL-1112NW	14.0	0.065	0.15	C-2F
OL-1100NW	18.0	0.026	0.15	C-2F
OL-3317NW	18.0	0.035	0.15	C-2F
OL-3092NW	28.0	0.020	0.05	CC-2F
OL-6839NW	28.0	0.024	0.15	CC-2F

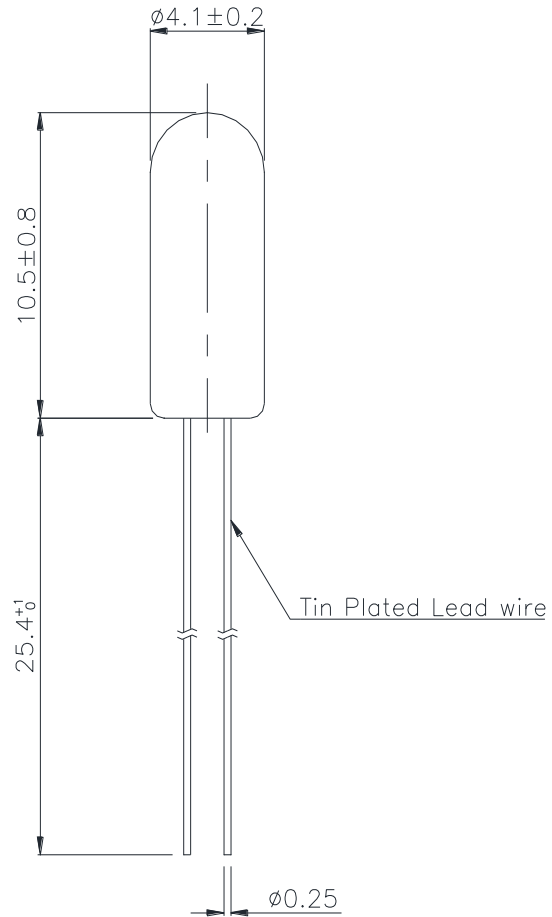


※ PCB THICKNESS 1.45mm~1.65mm



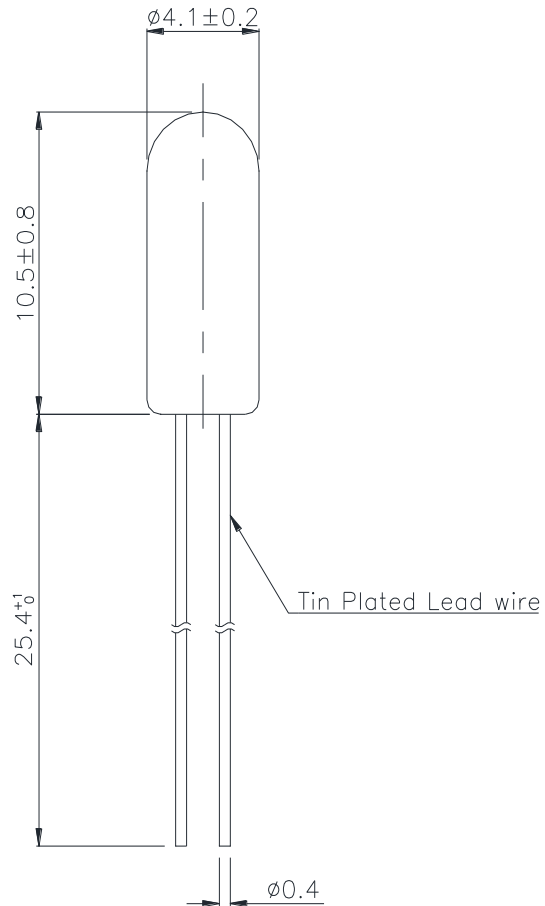
T-1 1/4 Wire Terminal

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-580	5.0	0.060	0.03	C-2R
OL-583	5.0	0.060	0.05	C-2R
OL-4003	5.0	0.075	0.09	C-2R
OL-515	5.0	0.115	0.15	C-2R
OL-634	6.0	0.200	0.63	C-2R
OL-4031	12.0	0.040	0.12	C-2F
OL-4054	12.0	0.060	0.15	C-2F
OL-4193	12.0	0.100	0.36	C-2F
OL-4369	13.5	0.048	0.06	C-2F
OL-4341	14.0	0.040	0.08	C-2F
OL-4239	14.0	0.040	0.15	C-2F
OL-4168	14.0	0.067	0.175	C-2F
OL-640	14.0	0.080	0.3	C-2F
OL-4029	14.0	0.080	0.5	C-2F
OL-4185	14.0	0.100	0.5	C-2F
OL-4300	14.0	0.100	0.7	C-2F
OL-4388	14.0	0.115	0.6	C-2F
OL-4073	28.0	0.024	0.15	C-2F
OL-4132	28.0	0.040	0.2	C-2F
OL-4008	28.0	0.040	0.3	C-2F
OL-627	28.0	0.040	0.34	C-2F



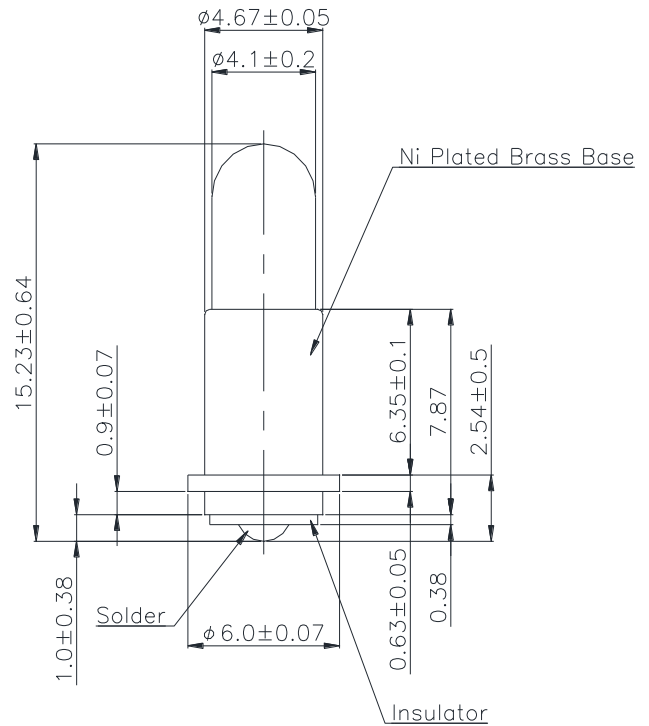
T-1 1/4 IBP $\phi 0.4\text{mm}(.016\text{'})\text{Pins}$

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-580IBP	5.0	0.060	0.03	C-2R
OL-583IBP	5.0	0.060	0.05	C-2R
OL-4003IBP	5.0	0.075	0.09	C-2R
OL-515IBP	5.0	0.115	0.15	C-2R
OL-634IBP	6.0	0.200	0.63	C-2R
OL-4031IBP	12.0	0.040	0.12	C-2F
OL-4239IBP	14.0	0.040	0.15	C-2F
OL-4168IBP	14.0	0.067	0.175	C-2F
OL-640IBP	14.0	0.080	0.3	C-2F
OL-4029IBP	14.0	0.080	0.5	C-2F
OL-4185IBP	14.0	0.100	0.5	C-2F
OL-4073IBP	28.0	0.024	0.15	C-2F
OL-4132IBP	28.0	0.040	0.2	C-2F
OL-4008IBP	28.0	0.040	0.3	C-2F
OL-627IBP	28.0	0.040	0.34	C-2F



T-1 1/4 Midget Flanged (Special)

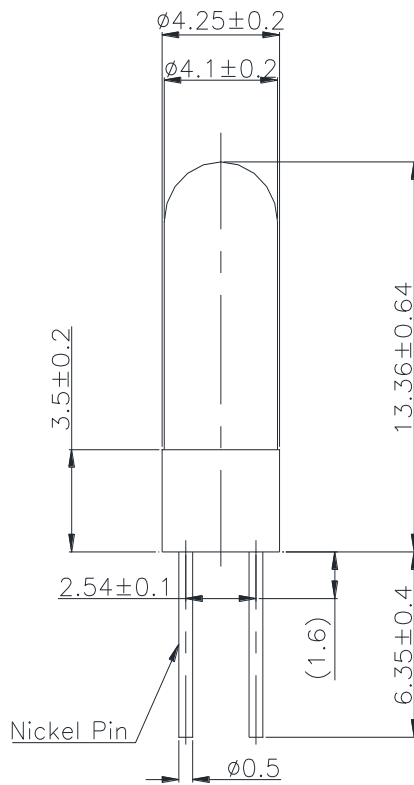
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-582	5.0	0.060	0.03	C-2R
OL-585	5.0	0.060	0.05	C-2R
OL-4004	5.0	0.075	0.09	C-2R
OL-518	5.0	0.115	0.15	C-2R
OL-628	6.0	0.200	0.63	C-2R
OL-4032	12.0	0.040	0.12	C-2F
OL-4030	14.0	0.080	0.3	C-2F
OL-646	14.0	0.080	0.5	C-2F
OL-4074	28.0	0.024	0.15	C-2F
OL-4133	28.0	0.040	0.2	C-2F
OL-4009	28.0	0.040	0.3	C-2F
OL-632	28.0	0.040	0.34	C-2F



T-1 1/4 Bi-Pin (Type-A)

Maximum Diameter 4.45mm Pin Spacing 2.54mm

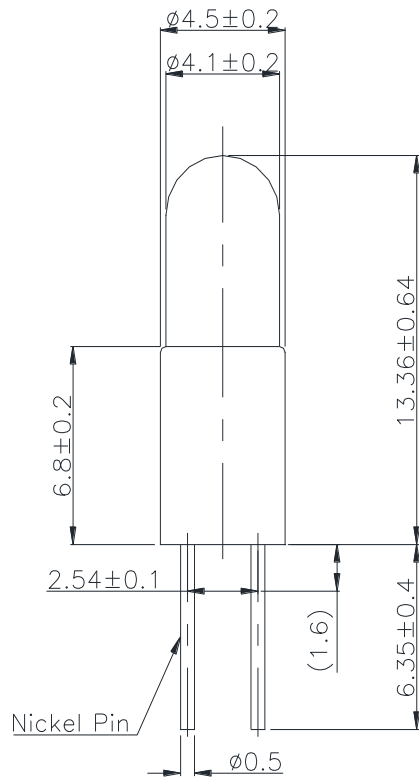
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-585BPA	5.0	0.060	0.05	C-2R
OL-4004BPA	5.0	0.075	0.09	C-2R
OL-518BPA	5.0	0.115	0.15	C-2R
OL-4042BPA	6.0	0.040	0.04	C-2V
OL-4015BPA	6.0	0.060	0.13	C-2R
OL-628BPA	6.0	0.200	0.63	C-2R
OL-4032BPA	12.0	0.040	0.12	C-2F
OL-4030BPA	14.0	0.080	0.3	C-2F
OL-646BPA	14.0	0.080	0.5	C-2F
OL-4097BPA	16.0	0.030	0.034	C-2F
OL-4060BPA	24.0	0.035	0.13	C-2F
OL-4074BPA	28.0	0.024	0.15	C-2F
OL-4133BPA	28.0	0.040	0.2	C-2F
OL-4009BPA	28.0	0.040	0.3	C-2F
OL-632BPA	28.0	0.040	0.34	C-2F



T-1 1/4 Bi-Pin (Type-E)

Maximum Diameter 4.7mm Pin Spacing 2.54mm

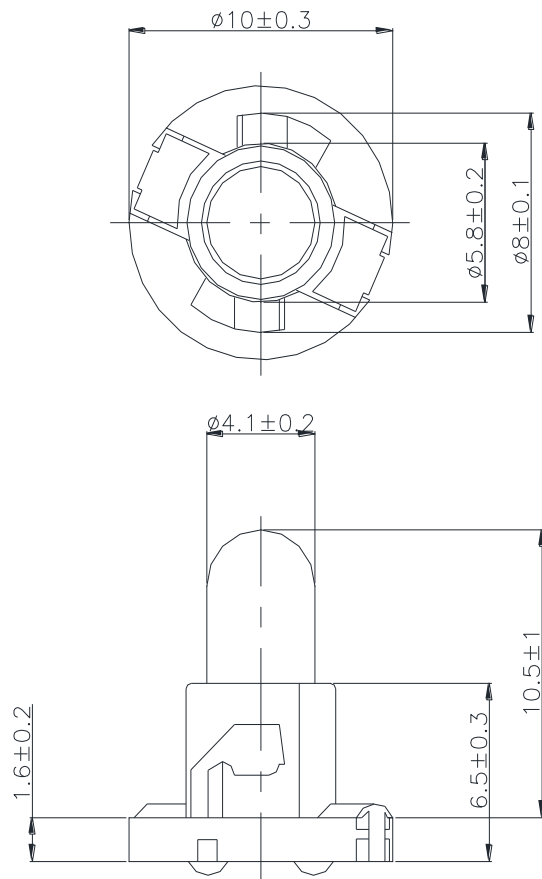
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-582BPE	5.0	0.060	0.03	C-2R
OL-585BPE	5.0	0.060	0.05	C-2R
OL-4004BPE	5.0	0.075	0.09	C-2R
OL-518BPE	5.0	0.115	0.15	C-2R
OL-628BPE	6.0	0.200	0.63	C-2R
OL-4032BPE	12.0	0.040	0.12	C-2F
OL-4240BPE	14.0	0.040	0.15	C-2F
OL-4222BPE	14.0	0.067	0.175	C-2F
OL-4030BPE	14.0	0.080	0.3	C-2F
OL-646BPE	14.0	0.080	0.5	C-2F
OL-4074BPE	28.0	0.024	0.15	C-2F
OL-4133BPE	28.0	0.040	0.2	C-2F
OL-4009BPE	28.0	0.040	0.3	C-2F
OL-632BPE	28.0	0.040	0.34	C-2F



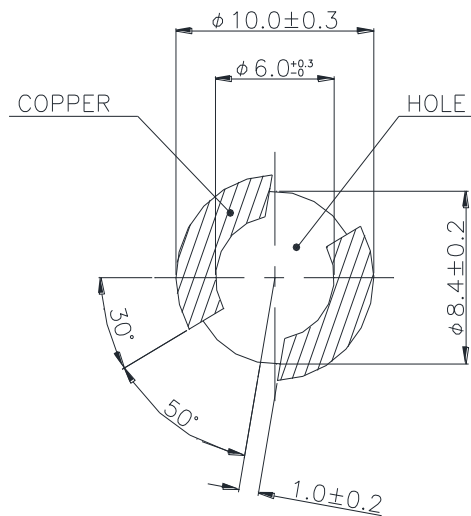
T-1 1/4 Neowedge

Base Diameter 10mm

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-582NW	5.0	0.060	0.03	C-2R
OL-585NW	5.0	0.060	0.05	C-2R
OL-4004NW	5.0	0.075	0.09	C-2R
OL-518NW	5.0	0.115	0.15	C-2R
OL-628NW	6.0	0.200	0.63	C-2R
OL-4032NW	12.0	0.040	0.12	C-2F
OL-4106NW	12.0	0.060	0.15	C-2F
OL-4194NW	12.0	0.100	0.36	C-2F
OL-4370NW	13.5	0.048	0.06	C-2F
OL-4342NW	14.0	0.040	0.08	C-2F
OL-4240NW	14.0	0.040	0.15	C-2F
OL-4030NW	14.0	0.080	0.3	C-2F
OL-646NW	14.0	0.080	0.5	C-2F
OL-4186NW	14.0	0.100	0.5	C-2F
OL-4301NW	14.0	0.100	0.7	C-2F
OL-4389NW	14.0	0.115	0.6	C-2F
OL-4074NW	28.0	0.024	0.15	C-2F
OL-4133NW	28.0	0.040	0.2	C-2F
OL-4009NW	28.0	0.040	0.3	C-2F
OL-632NW	28.0	0.040	0.34	C-2F



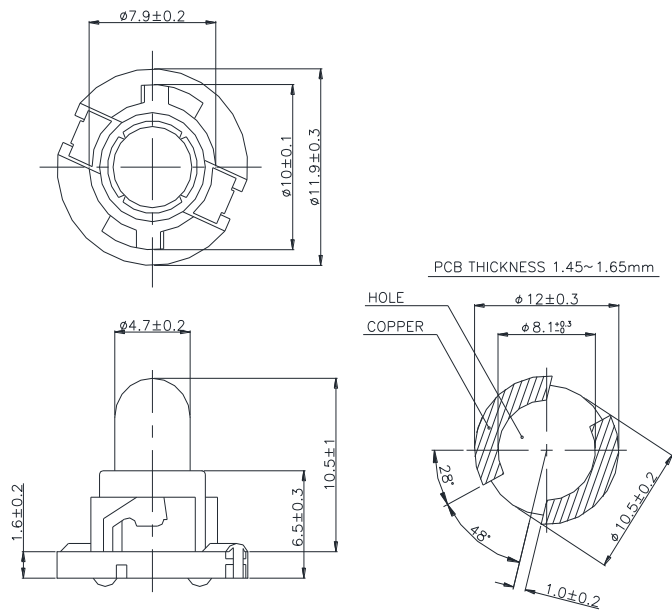
PCB THICKNESS 1.45~1.65mm



T-1 1/2 Neowedge

Base Diameter 11.9mm

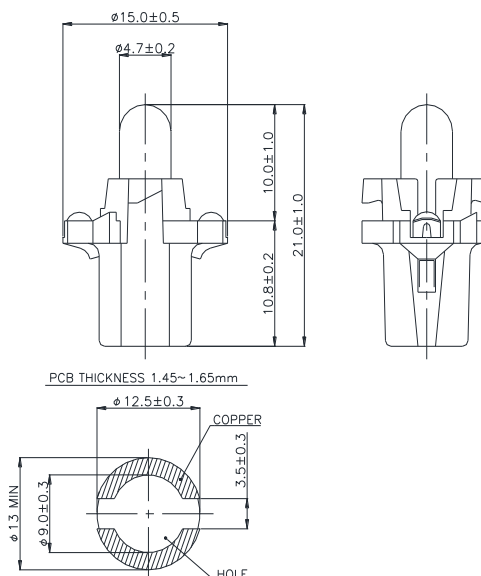
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-5061NW	5.0	0.060	0.03	C-2R
OL-5001NW	5.0	0.060	0.05	C-2R
OL-5062NW	5.0	0.060	0.15	C-2R
OL-5002NW	5.0	0.115	0.15	C-2R
OL-5023NW	6.0	0.060	0.13	C-2R
OL-5013NW	6.0	0.200	0.63	C-2R
OL-5006NW	12.0	0.040	0.12	C-2F
OL-5025NW	12.0	0.060	0.15	C-2F
OL-5059NW	14.0	0.040	0.15	C-2F
OL-5015NW	14.0	0.080	0.3	C-2F
OL-5014NW	14.0	0.080	0.5	C-2F
OL-5021NW	14.0	0.100	0.5	C-2F
OL-5026NW	24.0	0.035	0.13	C-2F
OL-5060NW	28.0	0.024	0.15	C-2F
OL-5018NW	28.0	0.040	0.2	C-2F
OL-5017NW	28.0	0.040	0.3	C-2F
OL-5016NW	28.0	0.040	0.34	C-2F



T-1 1/2 P.C.Board Bayonet(Type-A)

Single Contact

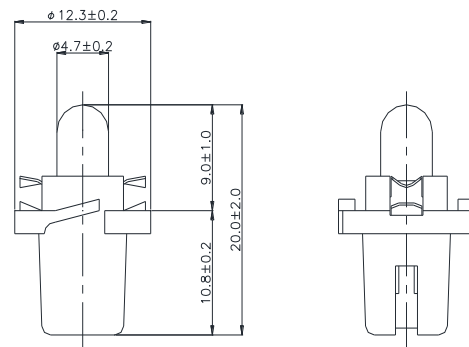
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-5001PBA	5.0	0.060	0.05	C-2R
OL-5002PBA	5.0	0.115	0.15	C-2R
OL-5023PBA	6.0	0.060	0.13	C-2R
OL-5024PBA	6.3	0.200	0.55	C-2R
OL-5025PBA	12.0	0.060	0.15	C-2F
OL-5033PBA	12.0	0.100	0.36	C-2F
OL-5034PBA	12.0	0.150	0.45	C-2F
OL-5037PBA	14.0	0.067	0.175	C-2F
OL-5015PBA	14.0	0.080	0.3	C-2F
OL-5026PBA	24.0	0.035	0.13	C-2F
OL-5027PBA	24.0	0.050	0.5	C-2F
OL-5017PBA	28.0	0.040	0.3	C-2F



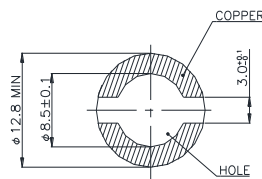
T-1 1/2 P.C.Board Bayonet (Type-B)

Double Contact

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-5001PBB	5.0	0.060	0.05	C-2R
OL-5002PBB	5.0	0.115	0.15	C-2R
OL-5023PBB	6.0	0.060	0.13	C-2R
OL-5024PBB	6.3	0.200	0.55	C-2R
OL-5025PBB	12.0	0.060	0.15	C-2F
OL-5033PBB	12.0	0.100	0.36	C-2F
OL-5034PBB	12.0	0.150	0.45	C-2F
OL-5037PBB	14.0	0.067	0.175	C-2F
OL-5015PBB	14.0	0.080	0.3	C-2F
OL-5026PBB	24.0	0.035	0.13	C-2F
OL-5027PBB	24.0	0.050	0.5	C-2F
OL-5017PBB	28.0	0.040	0.3	C-2F



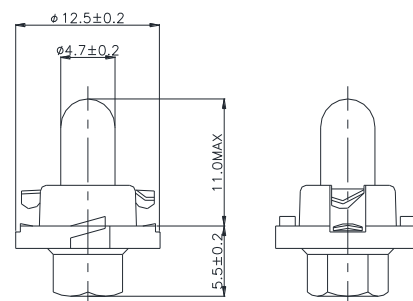
PCB THICKNESS 1.45~1.65mm



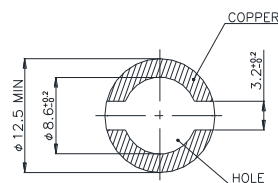
T-1 1/2 P.C.Board Bayonet (Type-C)

Double Contact

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-5001PBC	5.0	0.060	0.05	C-2R
OL-5002PBC	5.0	0.115	0.15	C-2R
OL-5023PBC	6.0	0.060	0.13	C-2R
OL-5024PBC	6.3	0.200	0.55	C-2R
OL-5025PBC	12.0	0.060	0.15	C-2F
OL-5033PBC	12.0	0.100	0.36	C-2F
OL-5034PBC	12.0	0.150	0.45	C-2F
OL-5037PBC	14.0	0.067	0.175	C-2F
OL-5015PBC	14.0	0.080	0.3	C-2F
OL-5026PBC	24.0	0.035	0.13	C-2F
OL-5027PBC	24.0	0.050	0.5	C-2F
OL-5017PBC	28.0	0.040	0.3	C-2F

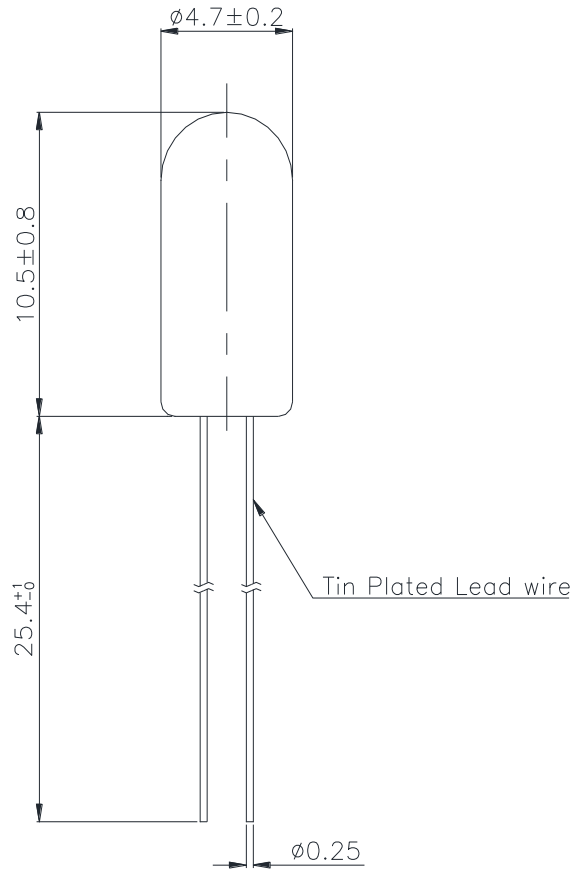


PCB THICKNESS 1.45~1.65mm



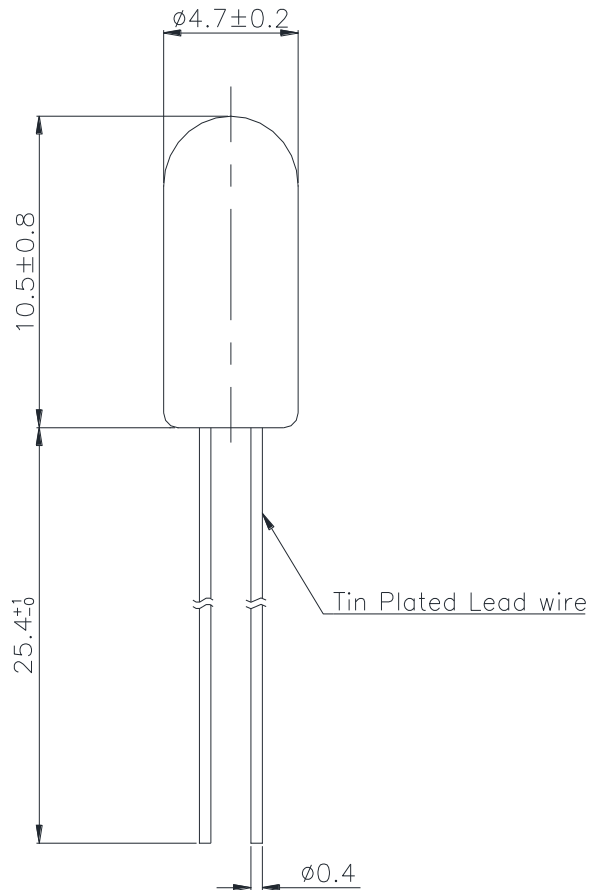
T-1 3/4 Wire Terminal

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-1783	2.5	0.200	0.2	C-2R
OL-2169	2.5	0.350	0.21	C-2R
OL-1738	2.7	0.060	0.04	C-2R
OL-6134	5.0	0.030	0.03	C-2R
OL-6062	5.0	0.040	0.025	C-2R
OL-805	5.0	0.060	0.03	C-2R
OL-806	5.0	0.060	0.05	C-2R
OL-6083	5.0	0.060	0.15	C-2R
OL-6232	5.0	0.075	0.09	C-2R
OL-807	5.0	0.115	0.15	C-2R
OL-1730	6.0	0.040	0.04	C-2V
OL-6225	6.0	0.060	0.13	C-2R
OL-1784	6.0	0.200	0.34@5V	C-2R
OL-2180	6.3	0.040	0.03	C-2V
OL-1739	6.3	0.075	0.23	C-2R
OL-6048	6.3	0.150	0.45	C-2R
OL-2181	6.3	0.200	0.4	C-2F
OL-2112	6.3	0.200	0.55	C-2R
OL-2107	10.0	0.040	0.08	C-2F
OL-2174	12.0	0.040	0.12	C-2F
OL-6037	12.0	0.060	0.15	C-2F
OL-2182	14.0	0.080	0.3	C-2F
OL-1705	14.0	0.080	0.5	C-2F
OL-1705L	14.0	0.088	0.5	C-2F
OL-2162	14.0	0.100	0.5	C-2F
OL-6425	14.0	0.125	0.7	C-2F
OL-6002	15.0	0.037	0.075	C-2F
OL-2102	18.0	0.040	0.15	C-2F
OL-6004	24.0	0.050	0.5	C-2F
OL-6033	28.0	0.024	0.15	C-2F
OL-2185	28.0	0.040	0.2	C-2F
OL-2187	28.0	0.040	0.3	C-2F
OL-1764	28.0	0.040	0.34	C-2F
OL-1764LSV	28.0	0.060	0.34	C-2F
OL-361	28.0	0.060	0.6	C-2F
OL-6435	28.0	0.065	0.65	C-2F



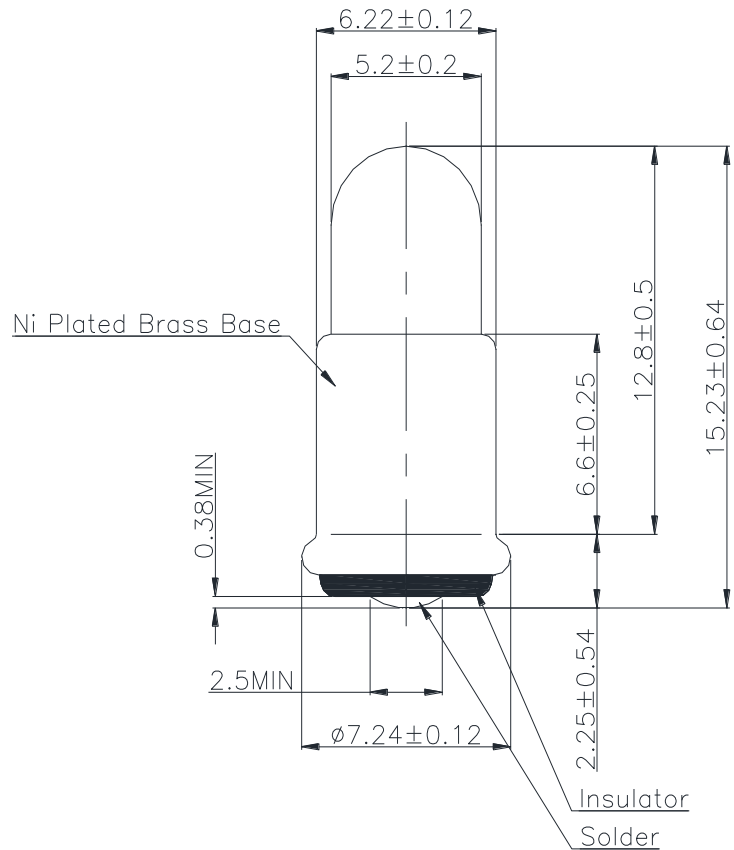
T-1 3/4 IBP $\phi 0.4\text{mm}(.016\text{'})\text{Pins}$

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-8061BP	5.0	0.060	0.05	C-2R
OL-6083IBP	5.0	0.060	0.15	C-2R
OL-6232IBP	5.0	0.075	0.09	C-2R
OL-8071BP	5.0	0.115	0.15	C-2R
OL-6225IBP	6.0	0.060	0.13	C-2R
OL-1784IBP	6.0	0.200	0.34@5V	C-2R
OL-6048IBP	6.3	0.150	0.45	C-2R
OL-2181IBP	6.3	0.200	0.4	C-2F
OL-2112IBP	6.3	0.200	0.55	C-2R
OL-2107IBP	10.0	0.040	0.08	C-2F
OL-6037IBP	12.0	0.060	0.15	C-2F
OL-2182IBP	14.0	0.080	0.3	C-2F
OL-1705IBP	14.0	0.080	0.5	C-2F
OL-2162IBP	14.0	0.100	0.5	C-2F
OL-2102IBP	18.0	0.040	0.15	C-2F
OL-6004IBP	24.0	0.050	0.5	C-2F
OL-2185IBP	28.0	0.040	0.2	C-2F
OL-2187IBP	28.0	0.040	0.3	C-2F
OL-1764IBP	28.0	0.040	0.34	C-2F
OL-1764LSV-IBP	28.0	0.060	0.34	C-2F
OL-3611BP	28.0	0.060	0.6	C-2F



T-1 3/4 Midget Flanged

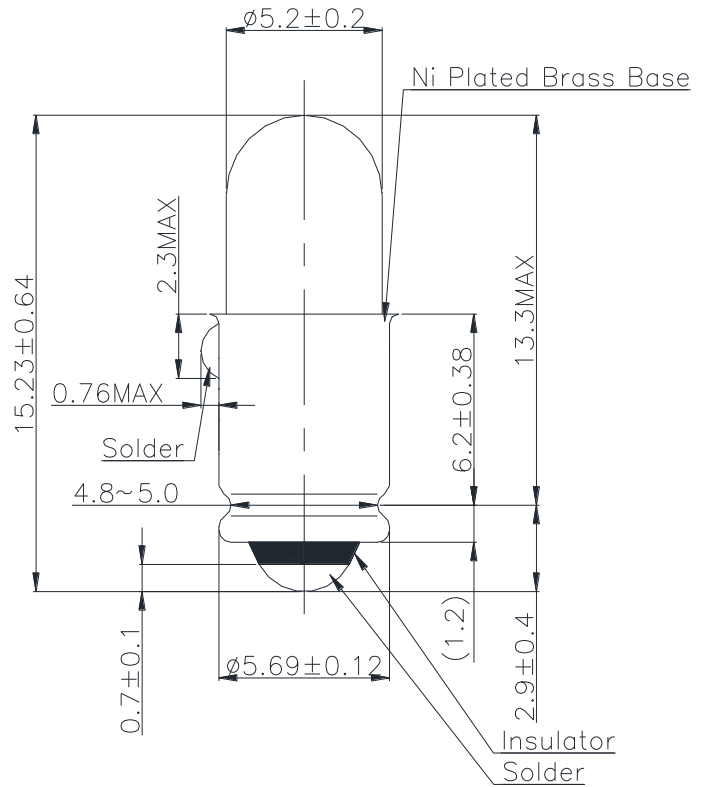
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-368*	2.5	0.200	0.2	C-2R
OL-338*	2.7	0.060	0.04	C-2R
OL-6063	5.0	0.040	0.025	C-2R
OL-782	5.0	0.060	0.03	C-2R
OL-783	5.0	0.060	0.05	C-2R
OL-6084	5.0	0.060	0.15	C-2R
OL-815	5.0	0.115	0.15	C-2R
OL-428	5.0	0.180	0.35	C-2R
OL-345	6.0	0.040	0.04	C-2V
OL-328*	6.0	0.200	0.34@5V	C-2R
OL-380	6.3	0.040	0.03	C-2V
OL-377	6.3	0.075	0.23	C-2R
OL-381*	6.3	0.200	0.4	C-2F
OL-349	6.3	0.200	0.55	C-2R
OL-367	10.0	0.040	0.08	C-2F
OL-394	12.0	0.040	0.12	C-2F
OL-382	14.0	0.080	0.3	C-2F
OL-330*	14.0	0.080	0.5	C-2F
OL-6006	14.0	0.088	0.5	C-2F
OL-8918*	14.0	0.100	0.5	C-2F
OL-6003	15.0	0.037	0.075	C-2F
OL-370	18.0	0.040	0.15	C-2F
OL-6005	24.0	0.050	0.5	C-2F
OL-6034	28.0	0.024	0.15	C-2F
OL-385	28.0	0.040	0.2	C-2F
OL-385AS15*	28.0	0.040	0.2	C-2F
OL-387*	28.0	0.040	0.3	C-2F
OL-327*	28.0	0.040	0.34	C-2F
OL-327LSV	28.0	0.060	0.34	C-2F
OL-365	28.0	0.060	0.6	C-2F
OL-6436	28.0	0.065	0.65	C-2F



*U.S Military Standard MS25237 Japan industry standard JIS C7522

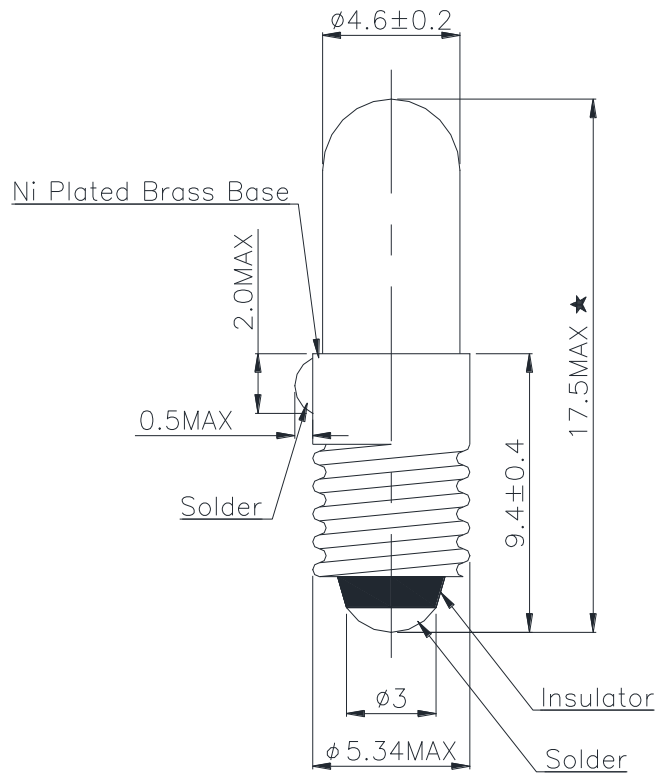
T-1 3/4 Midget Grooved

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-6039	5.0	0.060	0.03	C-2R
OL-6043	5.0	0.115	0.15	C-2R
OL-337	6.0	0.200	0.34@5V	C-2R
OL-6381	6.3	0.150	0.45	C-2R
OL-379	6.3	0.200	0.4	C-2F
OL-398	6.3	0.200	0.55	C-2R
OL-6045	12.0	0.040	0.12	C-2F
OL-386	14.0	0.080	0.3	C-2F
OL-336	14.0	0.080	0.5	C-2F
OL-6339	14.0	0.100	0.5	C-2F
OL-6219	28.0	0.024	0.15	C-2F
OL-6047	28.0	0.040	0.2	C-2F
OL-388	28.0	0.040	0.3	C-2F
OL-334	28.0	0.040	0.34	C-2F
OL-334LSV	28.0	0.060	0.34	C-2F



T-1 3/4 Midget Screw

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-1767*	2.5	0.200	0.2	C-2R
OL-1769*	2.5	0.200	0.2	C-2R
OL-693	2.7	0.060	0.04	C-2R
OL-6015	5.0	0.060	0.03	C-2R
OL-6040	5.0	0.060	0.05	C-2R
OL-6042	5.0	0.115	0.15	C-2R
OL-342*	6.0	0.040	0.04	C-2V
OL-1768*	6.0	0.200	0.34@5V	C-2R
OL-1775	6.3	0.075	0.23	C-2R
OL-6008	6.3	0.150	0.45	C-2R
OL-1768L	6.3	0.200	0.55	C-2R
OL-378	6.3	0.200	0.4	C-2F
OL-691	10.0	0.014	0.004	C-2F
OL-6044	12.0	0.040	0.12	C-2F
OL-362	14.0	0.080	0.3	C-2F
OL-373	14.0	0.080	0.5	C-2F
OL-536	18.0	0.040	0.15	C-2F
OL-384	28.0	0.040	0.2	C-2F
OL-399	28.0	0.040	0.3	C-2F
OL-335*	28.0	0.040	0.34	C-2F
OL-335LSV	28.0	0.060	0.34	C-2F

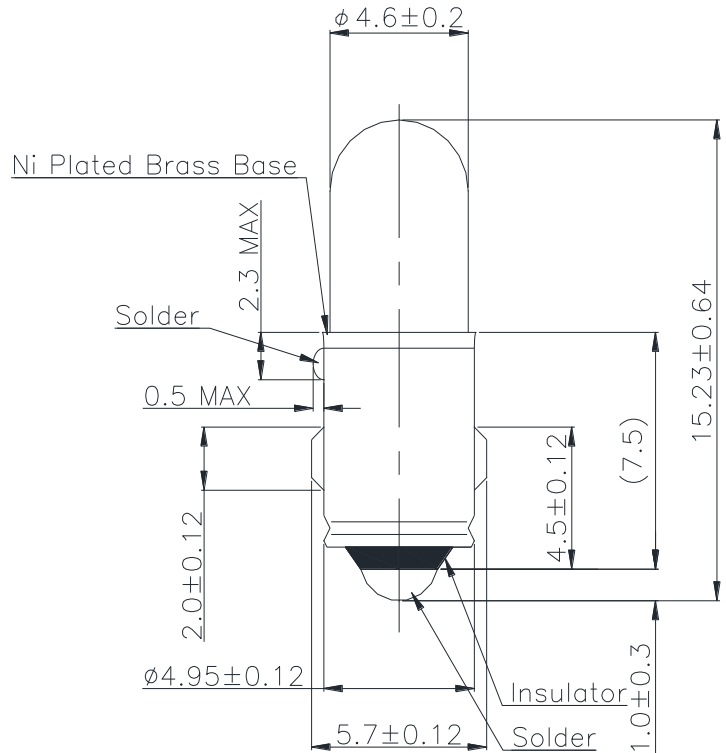


★MS15612
 OL-1767 15.88mm
 OL-1768 15.88mm
 OL-335 18.26mm
 OL-342 18.26mm
 OL-1769 18.26mm

*U.S Military Standard MS15612

T-1 3/4 Midget Bayonet

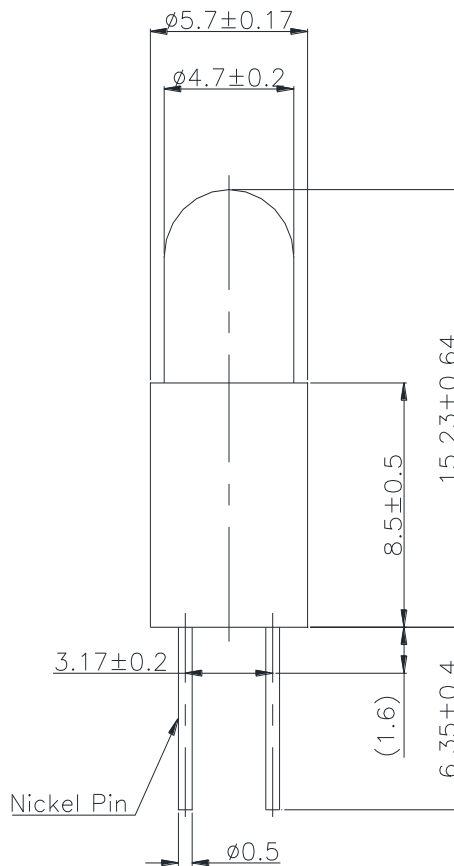
Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-368MB	2.5	0.200	0.2	C-2R
OL-268MB	2.5	0.350	0.21	C-2R
OL-338MB	2.7	0.060	0.04	C-2R
OL-6133MB	3.0	0.040	0.03	C-2R
OL-6049MB	4.5	0.120	0.045	C-2V
OL-783MB	5.0	0.060	0.05	C-2R
OL-6084MB	5.0	0.060	0.15	C-2R
OL-6233MB	5.0	0.075	0.09	C-2R
OL-815MB	5.0	0.115	0.15	C-2R
OL-345MB	6.0	0.040	0.04	C-2V
OL-6226MB	6.0	0.060	0.13	C-2R
OL-380MB	6.3	0.040	0.03	C-2V
OL-350MB	6.3	0.150	0.45	C-2R
OL-381MB	6.3	0.200	0.4	C-2F
OL-367MB	10.0	0.040	0.08	C-2F
OL-394MB	12.0	0.040	0.12	C-2F
OL-382MB	14.0	0.080	0.3	C-2F
OL-330MB	14.0	0.080	0.5	C-2F
OL-6006MB	14.0	0.088	0.5	C-2F
OL-6003MB	15.0	0.037	0.075	C-2F
OL-370MB	18.0	0.040	0.15	C-2F
OL-6005MB	24.0	0.050	0.5	C-2F



T-1 3/4 Bi-Pin

Maximum Diameter 5.87mm(.230") Pin Spacing 3.17mm(.125")

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-368BP	2.5	0.200	0.2	C-2R
OL-268BP	2.5	0.350	0.21	C-2R
OL-338BP	2.7	0.060	0.04	C-2R
OL-6135BP	5.0	0.030	0.03	C-2R
OL-6063BP	5.0	0.040	0.025	C-2R
OL-782BP	5.0	0.060	0.03	C-2R
OL-783BP	5.0	0.060	0.05	C-2R
OL-6084BP	5.0	0.060	0.15	C-2R
OL-6233BP	5.0	0.075	0.09	C-2R
OL-815BP	5.0	0.115	0.15	C-2R
OL-428BP	5.0	0.180	0.35	C-2R
OL-345BP	6.0	0.040	0.04	C-2V
OL-6226BP	6.0	0.060	0.13	C-2R
OL-328BP	6.0	0.200	0.34@5V	C-2R
OL-380BP	6.3	0.040	0.03	C-2V
OL-377BP	6.3	0.075	0.23	C-2R
OL-350BP	6.3	0.150	0.45	C-2R
OL-381BP	6.3	0.200	0.4	C-2F
OL-349BP	6.3	0.200	0.55	C-2R
OL-367BP	10.0	0.040	0.08	C-2F
OL-394BP	12.0	0.040	0.12	C-2F
OL-6038BP	12.0	0.060	0.15	C-2F
OL-382BP	14.0	0.080	0.3	C-2F
OL-330BP	14.0	0.080	0.5	C-2F
OL-6006BP	14.0	0.088	0.5	C-2F
OL-8918BP	14.0	0.100	0.5	C-2F
OL-6426BP	14.0	0.125	0.7	C-2F
OL-6003BP	15.0	0.037	0.075	C-2F
OL-370BP	18.0	0.040	0.15	C-2F
OL-6005BP	24.0	0.050	0.5	C-2F
OL-6034BP	28.0	0.024	0.15	C-2F
OL-385BP	28.0	0.040	0.2	C-2F
OL-387BP	28.0	0.040	0.3	C-2F
OL-327BP	28.0	0.040	0.34	C-2F
OL-327LSV-BP	28.0	0.060	0.34	C-2F
OL-365BP	28.0	0.060	0.6	C-2F



T-1 3/4 Bi-Pin(Relampable)

Oshino Lamp Numbers	Design Volt(V)	Design Amp(A)	MSCP (cd)	Filament shape
OL-368BPR	2.5	0.200	0.2	C-2R
OL-268BPR	2.5	0.350	0.21	C-2R
OL-338BPR	2.7	0.060	0.04	C-2R
OL-375BPR	3.0	0.015	0.003	C-2R
OL-6135BPR	5.0	0.030	0.03	C-2R
OL-6063BPR	5.0	0.040	0.025	C-2R
OL-782BPR	5.0	0.060	0.03	C-2R
OL-783BPR	5.0	0.060	0.05	C-2R
OL-6084BPR	5.0	0.060	0.15	C-2R
OL-6233BPR	5.0	0.075	0.09	C-2R
OL-815BPR	5.0	0.115	0.15	C-2R
OL-428BPR	5.0	0.180	0.35	C-2R
OL-345BPR	6.0	0.040	0.04	C-2V
OL-6226BPR	6.0	0.060	0.13	C-2R
OL-328BPR	6.0	0.200	0.34@5V	C-2R
OL-380BPR	6.3	0.040	0.03	C-2V
OL-377BPR	6.3	0.075	0.23	C-2R
OL-350BPR	6.3	0.150	0.45	C-2R
OL-381BPR	6.3	0.200	0.4	C-2F
OL-349BPR	6.3	0.200	0.55	C-2R
OL-367BPR	10.0	0.040	0.08	C-2F
OL-394BPR	12.0	0.040	0.12	C-2F
OL-6038BPR	12.0	0.060	0.15	C-2F
OL-382BPR	14.0	0.080	0.3	C-2F
OL-330BPR	14.0	0.080	0.5	C-2F
OL-6006BPR	14.0	0.088	0.5	C-2F
OL-8918BPR	14.0	0.100	0.5	C-2F
OL-6426BPR	14.0	0.125	0.7	C-2F
OL-6003BPR	15.0	0.037	0.075	C-2F
OL-370BPR	18.0	0.040	0.15	C-2F
OL-6005BPR	24.0	0.050	0.5	C-2F
OL-6034BPR	28.0	0.024	0.15	C-2F
OL-385BPR	28.0	0.040	0.2	C-2F
OL-387BPR	28.0	0.040	0.3	C-2F
OL-327BPR	28.0	0.040	0.34	C-2F
OL-327LSV/BPR	28.0	0.060	0.34	C-2F
OL-365BPR	28.0	0.060	0.6	C-2F

