

LAMPS



MICRO LAMPS™

T-3/4 LAMPS approx. 3/32" (2.4mm) dia.



volts	amps	life (hrs.)	part #
5	0.06	25000	6833 ML

T-1 LAMPS approx. 1/8" (3.2mm) diameter

volts	amps	life (hrs.)	wire	flange	bi-pin
5v	0.06	60000	680 ML	682 ML	7680 ML*
5v	0.06	25000	683 ML	685 ML	7683 ML
12v	0.06	16000	7219 ML*	32 ML	8097 ML
14v	0.065	10000	8111 ML	8112 ML*	8098 ML
18v	0.026	10000	7220 ML*	7241 ML	8099 ML
28v	0.024	4000	6838 ML	6839 ML	7839 ML

*special order, 3-4 week delivery.

L.E.D.s (Light Emitting Diodes)

square 2 x 5 mm (limit I to 10mA)	LED SQ 2 (red) LED SQ 4 (yel) LED SQ 5 (grn)
miniature T-1 (3 mm) (limit I to 10mA)	LED SM 2 (red) LED SM 4 (yel) LED SM 5 (grn)
standard T-1 3/4 (5 mm) (limit I to 20mA)	LED 2 (red) LED 4 (yel) LED 5 (grn) LED 6 (blu)
bi-directional & bi-color T-1 3/4 (5 mm)	LED-BI (red & grn)
blinking T-1 3/4 (5 mm)	LED BL 2 (red) LED BL 4 (yel) LED BL 5 (grn)
super bright T-1 3/4 (5 mm)	LED BR (red) LED 9 (clear)
panel mounting accessory lens (holds LED in place)	8663 KEY (grn) 8664 KEY (yel) 8665 KEY (clr)
panel mounting accessory collar (holds LED in place)	11-480B PHI

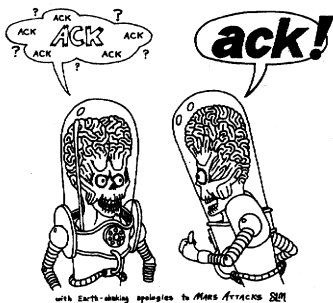
T-1 1/4 LAMPS •approx. 5/32" (4mm) diameter

v	amp	hrs.	wire	bi-pin	screw	knurled
1.35v	0.06	500	8631 ML*	7636 ML*	8641 ML*	8647 ML
2.5v	0.4	30	8655 ML	7307 ML*	329 ML*	326 ML*
3v	0.19	350	324 ML*	7637 ML*	325 ML	323 ML
5v	0.06	60000	580 ML*	7580 ML*	3583 ML*	-
14v	0.08	500	8640 ML*	7646 ML	8644 ML*	8654 ML*

*Not a regular stock item at Ack, but we can special order it for you!

GRAIN OF WHEAT LAMPS

— Ack stocks small lamps with insulated wire leads attached. **GW-6 (6v) GW-12 (12v) GW-24 (24v).**



TELEPHONE NUMBER
Micro Lamps 708-879-0900




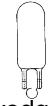

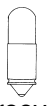
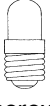
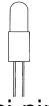
404-351-6340 ACK Atlanta 800-282-7954



LAMPS



T-1³/₄ LAMPS approx. 7/32" (5.6mm) diameter

volts	amps	life (hrs.)	 wire	 wedge	 flange	 groove	 screw	 bi-pin
1.35	0.06	500	1728 ML	N/A	331 ML	698*	8669*	7931*
2.5	0.2	500	1783 ML*	N/A	368 ML	8699*	1767*	7968*
2.7	0.06	6000	1738 ML	N/A	338 ML	8704*	8693*	7838
3	0.015	10000	2158 ML	N/A	375 ML	390*	7313*	7375*
5	0.06	25000	2200 ML*	N/A	7333 ML	7347*	7318*	7361
5	0.06	5000	3151 ML*	N/A	3150 ML*	3152*	3153*	3149
5	0.115	40000	2203 ML*	56 ML	7335 ML	7348*	7319*	7362*
6	0.04	10000	1730 ML	N/A	345 ML	8705*	342*	7945*
6	0.2	1000	1784 ML*	N/A	328 ML	337	1768	7328
6.3	0.04	20000	2180 ML*	84 ML*	380 ML	7351*	7320*	7380
6.3	0.075	1000	1739 ML	N/A	377 ML*	8708*	1775*	7377*
6.3	0.15	3000	8350 ML	N/A	350 ML	7352*	7321*	7368*
6.3	0.2	20000	2181 ML	86 ML	381 ML	379	378	7381
6.3	0.2	5000	2112 ML*	N/A	349 ML	398	7323*	7349*
10	0.014	5000	1869 ML	N/A	344 ML	709*	8691*	7344
10	0.04	5000	2107 ML*	N/A	367 ML	397	389	7367*
11	0.022	10000	8946 ML*	N/A	7338 ML	7353*	7325*	7369*
12	0.04	10000	2174 ML*	N/A	394 ML	7354*	7326*	7371
14	0.08	15000	2182 ML	73 ML	382 ML	386	8362*	7382
14	0.08	1500	1705 ML*	N/A	330 ML	336	373	7330
14	0.1	10000	2162 ML*	37 ML	8918 ML*	393*	8162*	7373
18	0.04	10000	2102 ML	N/A	370 ML	346	8536*	7370
22	0.04	2000	8425 ML*	N/A	459 ML	457	8437*	7549*
24	0.05	1000	2176 ML	N/A	8176 ML*	8177*	N/A	7001
28	0.04	10000	2185 ML	N/A	385 ML	7355*	8384*	7374*
28	0.04	7000	2187 ML	85 ML	387 ML	388	399	7387
28	0.04	4000	1764 ML	N/A	327 ML	334	335	7327
28	0.06	25000	476 ML*	N/A	376 ML	7356*	8369*	7376

*special order item; 3-4 week delivery.

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800-338-4218 ACK Birmingham 205-322-0588

LAMPS



T-2 FUSE LAMP (3AG size)			
volts	amps	life	part #
6	0.2	5000	SB-6 (alias #550)
8	0.1	5000	SB-8 (alias #660)
12	0.15	5000	SB-12 (alias #780)

T-4.6 & T-5.5 EUROPEAN SLIDE BASE				
volts	amps	life (hrs.)	4.6 mm x 22 mm	5.5 mm x 30 mm
6	0.02	8000	T4.6-6V/20MA	T5.5-6V/20MA*
12	0.05	6000	T4.6-12V/50MA	T5.5-12V/50MA
24	0.02	8000	T4.6-24V/20MA	T5.5-24V/20MA*
24	0.04	6000	T4.6-24V/40MA	T5.5-24V/40MA*
24	0.05	6000	T4.6-24V/50MA	T5.5-24V/50MA
28	0.05	6000	N/A	T5.5-28V/50MA
30	0.04	6000	T4.6-30V/40MA	T5.5-30V/40MA*
36	0.02	6000	T4.6-36V/20MA	T5.5-36V/20MA*

*not an item that Ack keeps on the shelf; special order.

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T-2 LAMPS •approx .250" (6.35mm) diameter						
volts	amps	life	wire term.	slide	bayonet	slide
5v	0.04	8000	5ES	5ESB	-	-
6v	0.04	4000	6ES*	6ESB	-	-
6v	0.14	15000	6PS*	6PSB	6MB*	6A
10v	0.017	20000	10CS	10CSB*	-	-
12v	0.04	5000	12ES	12ESB	-	12B*
12v	0.1	8000	-	-	-	12A
12v	0.17	12000	12PS*	12PSB	12MB	12C*
16v	0.04	7500	16ES*	16ESB	-	-
18v	0.04	5000	18ES	18ESB	-	18A
24v	0.017	15000	24CS*	24CSB	-	-
24v	0.03	1000	-	-	-	24A
24v	0.035	7000	-	-	-	24X ^a
24v	0.04	5000	24ES*	24ESB	-	24B*
24v	0.072	6000	24PS*	24PSB	24MB	24C*
28v	0.04	5000	28PS*	28PSB	28MB	-
28v	0.04	6000	28ES*	28ESB	-	-
48v	0.053	10000	48PS*	48PSB*	48MB	-
60v	0.05	5000	60PS*	60PSB	60MB	60A*
120v	0.025	1200	120PS	120PSB	120MB	-

*not on the shelf at Ack; 2-3 week delivery. ^aprick-punch base

B-3½ FLASHLIGHT BULBS			
volts	amps	life	
2.33v	0.27	10	PR4
2.38v	0.5	15	PR2
2.47v	0.3	30	PR6
3.57v	0.5	15	PR3
3.7v	0.3	30	PR7
4.75v	0.5	15	PR13
4.82v	0.5	30	PR15
4.90v	0.3	30	PR17
5.95v	0.5	15	PR12
7.2v	0.55	20	PR18

KRYPTON & HALOGEN LAMPS--See "flashlight" section.






WD-2893 GC
WORK LIGHT—Yellow Jacket work light with protective steel guard. Full lifetime guarantee. 25' long. 16 awg, 3 conductor SJTW-A.
WD-2893 GC

B-6 LAMPS •approx. 3/4" (19.1mm) diameter	
volts	12.8
amps	0.94
life	100
	1003 ML
	1004 ML


LAMPS




T-3¼ LAMPS •approx. 13/32" diameter




volts	amps	life (hrs.)			
			wedge	screw	bayonet
2v	0.06	1000	-	48 ML	49 ML
2.5v	0.5	3000	-	41 ML	43 ML
3.2v	0.16	3000	-	-	1490 ML
3.2v	0.35	3000	-	42 ML	45 ML
5v	0.09	1500	-	-	1850 ML
6.3v	0.15	20000	-	-	755 ML
6.3v	0.15	5000	-	-	1847
6.3v	0.15	3000	447*	40 ML	47 ML
6.3v	0.25	5000	259 ML	-	1866 ML
6.3v	0.25	3000	555*	46 ML	44 ML
6.3v	0.36	5000	-	-	239 ML
6.3v	0.4	3000	-	-	1810 ML
13v	0.33	1000	192 ML	-	1816 ML
14v	0.08	15000	658 ML	-	756 ML
14v	0.15	200	-	-	1488 ML
14v	0.2	3000	-	1487	1815 ML
14v	0.24	500	158*	-	1891 ML
14v	0.27	1500	194 ML	-	1889*
14v	0.35	1500	168 ML	-	-
14.4v	0.1	1000	-	-	1813 ML
18v	0.15	250	-	-	1826 ML
28v	0.04	2500	585*	-	1819 ML
28v	0.06	2500	656 ML	-	-
28v	0.07	1000	3829*	-	1829 ML
28v	0.08	7500	657 ML	-	757 ML
28v	0.1	1000	400*	-	1820 ML
28v	0.17	500	-	1821 ML	313 ML
28v	0.2	7000	-	-	1873 ML
36v	0.1	1000	-	-	1822 ML
37.5v	0.05	3000	-	1832 ML	1828 ML
55v	0.05	5000	-	-	1835 ML

*special order item, 3-4 week delivery.
115vac—see also T-3¼ neon table for 115vac.

T-4½ & 5 LAMPS •15.88 mm dia.		
volts	24v T-5	28v T-4½
amps	2.75	0.3
life (hrs.)	125	500
	1489 ML	1495 ML

GTL-3 LENS-END LAMPS approx. 3/8" dia.		
volts	1.2	2.2
amps	0.2	0.2
life (hrs.)	5	5
	112 ML	222 ML




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G-3½ LAMPS approx. 7/16" (11.1 mm) dia.					
volts	amps	life (hrs.)			
			screw	bayonet	2 pin
1.25	0.3	10	123ML	N/A	N/A
2.46	0.5	15	245ML	N/A	N/A
2.47	0.3	15	14 ML	N/A	N/A
2.5	0.5	3000	N/A	N/A	10 ML
3.7	0.3	15	13 ML	N/A	N/A
6.3	0.15	5000	N/A	130*	12 ML
6.3	0.25	5000	N/A	219ML	N/A
7.5	0.22	1000	50*	51 ML	N/A
14.4	0.1	1000	52 ML	N/A	N/A
14.4	0.1	1000	N/A	N/A	19 ML
14.4	0.12	1000	N/A	53 ML	N/A
18	0.15	250	1447	N/A	N/A
28	0.17	500	N/A	356ML	N/A

*non-stock item.

LAMPS





G-4½ LAMPS approx. 9/16" (14.3mm dia.)					
volts	amps	life (hrs.)	 screw	 bayonet	 2 pin
4.9	0.3	50	407 ML	N/A	N/A
4.9	0.3	30	27 ML	N/A	N/A
5	0.5	15	425 ML	N/A	N/A
5.1	0.15	100	502 ML	503*	N/A
6	0.04	500	1483 ML	N/A	N/A
6.15	0.5	15	605 ML	N/A	N/A
6.5	0.5	500	N/A	455 ML	N/A
7	0.41	500	N/A	55 ML	15 ML
14	0.27	500	N/A	257 ML	N/A



*special order item, 3 week delivery time.



Let Ack send your parts speeding to you!

RP-11 LAMPS approx. 1-3/8" dia.	
volts	6.2
amps	3.91
life (hrs.)	200
 s.c. bayonet	1133 ML
 bayonet	1134 ML


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G-6 LAMPS •approx. 3/4" (19 mm) dia.				
volts	amps	life (hrs.)	 s.c. bayonet	 d.c. bayonet
6.5v	1.02	500	81 ML	82 ML
7v	0.63	1000	63 ML*	64 ML
13v	0.58	750	89 ML	90 ML
13.5v	0.59	5000	67 ML	68 ML
28v	0.23	2000	1251 ML	304 ML

*not stocked by Ack (special order).

IMPORTANT! All neons require limitation such as a resistor in series. Some neons have this resistance built into the base or attached to the leads. Failure to provide current limiting resistance will cause lamp damage and possibility of lamp implosion.






T-2 NEONS (circuit components)			
initial dc breakdown voltage	design current (mA) nom.	external recommended resistance (ohms)	
64-80	5	15k	5AG(NE81)
60-100	5	15k	5AH(NE83)



NEON AC/DC OPERATION—Neons will work on either ac or dc, but on dc operation, only the cathode (negative electrode) emits light. The BDV (breakdown voltage) is 1.41 times higher than ac operation.



LAMPS







S-8 LAMPS approx. 1" dia.					
volts	amps	life (hrs.)	 s.c. bayonet	 d.c. bayonet	 d.c. index
6v	4.1	300	1680 ML	-	-
6.4v	2.63	200	1129 ML	1130*	-
6.5v	2.75	100	-	1493ML	-
6.8v	1.91	300	87 ML*	88 ML	-
12.8v	1.04	500	93 ML	94 ML*	-
12.8v	1.44	500	1141 ML	1142 ML	-
12.8v	2.1	600	1156 ML	-	-
12.8/14	2.1/.59	600/5000	-	-	1157ML
28v	.67/51	300	307 ML	306 ML	-

*special order item (not stocked by Ack)

T-3¼ NEON (105-125v) •approx. 13/32" dia.		
pix	 glass	 plastic
nom. current (mA)	0.3	1.2
external resistance required (ohms)	220K	47K
life (hrs.)	15000	25000
part #	B1A (NE51)	B2A (NE51H)

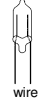
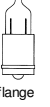
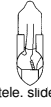
C-7 LAMPS approx. .875" dia.				
volts	amps	life (hrs.)	 cand. screw	 d.c. bayonet
115-125	0.058	3000	7C7-120V	-
115-125	0.083	5000	10C7	10C7DC-115V

T-4½ NEON •14.3mm dia. 105-125v 2mA	
	
Needs 30K ohm external resistor, 7500 hour life, D.C. bayonette base. #B9A (NE48) ML	No external resistor needed, 7500 hour life, cand. screw base. #B7A(NE45) ML

S-6 & 10 LAMPS approx. 3/4" dia.				
volts	amp	life (hrs.)	 cand. screw	 d.c. bayonet
12v	0.5	1500	6S6-12V	6S6DC-12V*
30v	0.2	1500	6S6-30V	6S6DC-30V*
115-125v	0.025	3000	3S6-125V	-
115-125v	0.05 .083	1500	6S6-120V 10S6-120V	6S6DC-120V
130-140v	0.044	1500	6S6-130V*	6S6DC-130V
140-150v	0.041	1500	6S6-145V	6S6DC-145V*
230-250v	0.04	1500	10S6-250V	10S6DC-250V*

*not a stock item at Ack; 2-3 week delivery.

MICRO LAMPS*

T-2 NEONS (110-125v) •approx. 1/4" dia.					
nom. current (mA)	external resistor required (ohms)	life (hrs.)	 wire	 flange	 tele. slide
0.3	220K	25000	A1B ML	A1G ML*	N/A
1.2	47K	25000	A1C ML*	A1H ML	N/A
0.5	150K	25000	A1A(NE2)	N/A	N/A
0.7	100K	25000	A9A-C ML*	C7A(NE2D)	N/A
1.9	30K	25000	C2A(NE2H)	C9A(NE2J)	K1A5(NE84)

*not a regular stock item (special order).