

TECHNICAL DATA NATIONAL

NUMERALS 0 thru 9			NL-5560/918	NL-5440	NL-5440A																																																																																																																																																																																																													
SYMBOLS + and -	†NL-5866SX	†NL-5866STX		NL-5442	NL-5442A																																																																																																																																																																																																													
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RT HAND DECIMAL																																																																																																																																																																																																																		
DOUBLE DECIMAL	†NL-5870S ■	†NL-5870ST		NL-5441	NL-5441A																																																																																																																																																																																																													
SPECIAL CHARACTER				NL-5448																																																																																																																																																																																																														
CHARACTER SIZE (INCHES)	.515	.515	.520	.610	.610																																																																																																																																																																																																													
VIEWING DISTANCE (FEET)	25	25	25	30	30																																																																																																																																																																																																													
ELECTRICAL RATINGS AND CHARACTERISTICS																																																																																																																																																																																																																		
Ionization Voltage (Maximum)	170 Vdc	170 Vdc	170 Vdc	170 Vdc	170 Vdc																																																																																																																																																																																																													
Supply Voltage (Minimum)	170 Vdc	170 Vdc	170 Vdc	170 Vdc	170 Vdc																																																																																																																																																																																																													
Cathode Current — Peak (Max.)	20 mA***	20 mA***	2.5 mA	3.5 mA	3.5 mA																																																																																																																																																																																																													
Average (Max.)	5.0 mA	5.0 mA	2.0 mA	3.0 mA	3.0 mA																																																																																																																																																																																																													
Average (Min.)	2.3 mA	2.3 mA	1.2 mA	1.5 mA	1.5 mA																																																																																																																																																																																																													
dc Prebias Voltage Limits...	60 Vdc to 120 Vdc	60 Vdc to 120 Vdc	50 Vdc to 120 Vdc	50 Vdc to 120 Vdc	50 Vdc to 120 Vdc																																																																																																																																																																																																													
**Recommended Operating Conditions dc Supply Voltage (Ebb)	170Vdc 250Vdc 300Vdc	170Vdc 250Vdc 300Vdc	170 Vdc	170Vdc 250Vdc 300Vdc	170Vdc 250Vdc 300Vdc																																																																																																																																																																																																													
Corresponding Anode Resistor (Rp)	10K 33K 47K	10K 33K 47K	20K	10K 39K 56K	10K 39K 56K																																																																																																																																																																																																													
Temperature Limits (Reduced Life)	-20°C to +55°C	-20°C to +55°C	-20°C to +55°C	-20°C to +55°C	-20°C to +55°C																																																																																																																																																																																																													
Weight	-40°C to +70°C 0.2 oz.	-40°C to +70°C 0.2 oz.	-40°C to +70°C 0.2 oz.	-40°C to +70°C 0.3 oz.	-40°C to +70°C 0.3 oz.																																																																																																																																																																																																													
OUTLINE DRAWINGS																																																																																																																																																																																																																		
Socket (See Page 12)	RTS-44		RTS-3	RTS-54																																																																																																																																																																																																														
Mounting Position	PIN 6 & 7 IN FRONT		PIN 6 IN FRONT	PINS 8 & 9 IN FRONT																																																																																																																																																																																																														
PIN CONNECTIONS	<table border="1" style="font-size: small;"> <thead> <tr> <th>PIN NO.</th> <th>CHARACTER</th> <th>NL-5866SX</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Minus</td></tr> <tr><td>2</td><td>2</td><td>~</td></tr> <tr><td>3</td><td>3</td><td>~</td></tr> <tr><td>4</td><td>4</td><td>~</td></tr> <tr><td>5</td><td>5</td><td>~</td></tr> <tr><td>6</td><td>6</td><td>Plus</td></tr> <tr><td>7</td><td>7</td><td>Anode</td></tr> <tr><td>8</td><td>8</td><td>~</td></tr> <tr><td>9</td><td>9</td><td>~</td></tr> <tr><td>10</td><td>10</td><td>Anode</td></tr> <tr><td>11</td><td>11</td><td>No Pin</td></tr> <tr><td>12</td><td>12</td><td>~</td></tr> <tr><td>13</td><td>13</td><td>Rt. Dec.</td></tr> <tr><td>14</td><td>14</td><td>Lt. Dec.</td></tr> </tbody> </table>	PIN NO.	CHARACTER	NL-5866SX	1	1	Minus	2	2	~	3	3	~	4	4	~	5	5	~	6	6	Plus	7	7	Anode	8	8	~	9	9	~	10	10	Anode	11	11	No Pin	12	12	~	13	13	Rt. Dec.	14	14	Lt. Dec.	<table border="1" style="font-size: small;"> <thead> <tr> <th>PIN NO.</th> <th>CHARACTER</th> <th>NL-5870ST</th> <th>NL-5866STX</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Minus</td><td>Minus</td></tr> <tr><td>2</td><td>2</td><td>~</td><td>~</td></tr> <tr><td>3</td><td>3</td><td>~</td><td>~</td></tr> <tr><td>4</td><td>4</td><td>~</td><td>~</td></tr> <tr><td>5</td><td>5</td><td>~</td><td>~</td></tr> <tr><td>6</td><td>6</td><td>Plus</td><td>Plus</td></tr> <tr><td>7</td><td>7</td><td>Anode</td><td>Anode</td></tr> <tr><td>8</td><td>8</td><td>~</td><td>~</td></tr> <tr><td>9</td><td>9</td><td>~</td><td>~</td></tr> <tr><td>10</td><td>10</td><td>Anode</td><td>No Pin</td></tr> <tr><td>11</td><td>11</td><td>~</td><td>~</td></tr> <tr><td>12</td><td>12</td><td>~</td><td>~</td></tr> <tr><td>13</td><td>13</td><td>Rt. Dec.</td><td>No Pin</td></tr> <tr><td>14</td><td>14</td><td>Lt. Dec.</td><td>No Pin</td></tr> </tbody> </table>	PIN NO.	CHARACTER	NL-5870ST	NL-5866STX	1	1	Minus	Minus	2	2	~	~	3	3	~	~	4	4	~	~	5	5	~	~	6	6	Plus	Plus	7	7	Anode	Anode	8	8	~	~	9	9	~	~	10	10	Anode	No Pin	11	11	~	~	12	12	~	~	13	13	Rt. Dec.	No Pin	14	14	Lt. Dec.	No Pin	<table border="1" style="font-size: small;"> <thead> <tr> <th>PIN NO.</th> <th>CHAR.</th> <th>5440</th> <th>5441</th> <th>5442</th> <th>5448</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Anode</td><td>Anode</td><td>Anode</td><td>Anode</td></tr> <tr><td>2</td><td>2</td><td>1</td><td>1</td><td>~</td><td>~</td></tr> <tr><td>3</td><td>3</td><td>2</td><td>2</td><td>~</td><td>~</td></tr> <tr><td>4</td><td>4</td><td>9</td><td>9</td><td>Minus</td><td>Minus</td></tr> <tr><td>5</td><td>5</td><td>7</td><td>7</td><td>~</td><td>~</td></tr> <tr><td>6</td><td>6</td><td>I.C.</td><td>Lt. Dec.</td><td>I.C.</td><td>I.C.</td></tr> <tr><td>7</td><td>7</td><td>8</td><td>8</td><td>~</td><td>~</td></tr> <tr><td>8</td><td>8</td><td>I.C.</td><td>I.C.</td><td>I.C.</td><td>I.C.</td></tr> <tr><td>9</td><td>9</td><td>3</td><td>3</td><td>~</td><td>~</td></tr> <tr><td>10</td><td>10</td><td>4</td><td>4</td><td>~</td><td>~</td></tr> <tr><td>11</td><td>11</td><td>5</td><td>Rt. Dec.</td><td>I.C.</td><td>Overload</td></tr> <tr><td>12</td><td>12</td><td>5</td><td>5</td><td>~</td><td>~</td></tr> <tr><td>13</td><td>13</td><td>6</td><td>6</td><td>Plus</td><td>Plus</td></tr> <tr><td>14</td><td>14</td><td>0</td><td>0</td><td>~</td><td>~</td></tr> <tr><td>15</td><td>15</td><td>I.C.</td><td>I.C.</td><td>I.C.</td><td>I.C.</td></tr> <tr><td>16</td><td>16</td><td>I.C.</td><td>I.C.</td><td>I.C.</td><td>I.C.</td></tr> </tbody> </table>	PIN NO.	CHAR.	5440	5441	5442	5448	1	1	Anode	Anode	Anode	Anode	2	2	1	1	~	~	3	3	2	2	~	~	4	4	9	9	Minus	Minus	5	5	7	7	~	~	6	6	I.C.	Lt. Dec.	I.C.	I.C.	7	7	8	8	~	~	8	8	I.C.	I.C.	I.C.	I.C.	9	9	3	3	~	~	10	10	4	4	~	~	11	11	5	Rt. Dec.	I.C.	Overload	12	12	5	5	~	~	13	13	6	6	Plus	Plus	14	14	0	0	~	~	15	15	I.C.	I.C.	I.C.	I.C.	16	16	I.C.	I.C.	I.C.	I.C.
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**See Fig. 1 & 3, Page 9. Use of the highest voltage available with the appropriate resistor is recommended.
 ***Strobe only