

UNCONTROLLED DOCUMENT

|                  |                                     |      |
|------------------|-------------------------------------|------|
| PART NUMBER      |                                     | REV. |
| OCP-PCD4116/X-TR |                                     |      |
| REV.             | E.C.N. NUMBER AND REVISION COMMENTS | DATE |

| ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C) |                                      |                      |                                                                   |                    |     |                    |
|-------------------------------------------|--------------------------------------|----------------------|-------------------------------------------------------------------|--------------------|-----|--------------------|
|                                           | PARAMETER                            | SYMBOL               | CONDITIONS                                                        | MIN                | TYP | MAX UNITS          |
| I                                         | FORWARD VOLTAGE                      | V <sub>F</sub>       | I <sub>F</sub> =20mA                                              | -                  | 1.2 | 1.4 V              |
|                                           | PEAK FORWARD VOLTAGE                 | V <sub>FM</sub>      | I <sub>FM</sub> =0.5A                                             | -                  | -   | 3.5 V              |
|                                           | REVERSE CURRENT                      | I <sub>R</sub>       | V <sub>R</sub> =4V                                                | -                  | -   | 10 µA              |
|                                           | TERMINAL CAPACITANCE                 | C <sub>t</sub>       | V=0, f=1kHz                                                       | -                  | 30  | - pF               |
| O                                         | COLLECTOR DARK CURRENT               | I <sub>CE0</sub>     | V <sub>CE</sub> =200V, I <sub>F</sub> =0                          | -                  | -   | 10 <sup>-6</sup> A |
| T                                         | CURRENT TRANSFER RATIO               | CRT                  | I <sub>F</sub> =1mA, V <sub>CE</sub> =2V                          | 600                | -   | 9000 %             |
|                                           | COLLECTOR-EMITTER SATURATION VOLTAGE | V <sub>CE(sat)</sub> | I <sub>F</sub> =20mA, I <sub>C</sub> =5mA                         | -                  | -   | 1.5 V              |
|                                           | ISOLATION RESISTANCE                 | R <sub>ISO</sub>     | DC500V                                                            | 5x10 <sup>10</sup> | -   | - ohm              |
|                                           | FLOATING CAPACITANCE                 | C <sub>f</sub>       | V=0, f=1MHz                                                       | -                  | 0.6 | 1.0 pF             |
|                                           | CUT-OFF FREQUENCY                    | f <sub>c</sub>       | V <sub>CE</sub> =5V, I <sub>C</sub> =2mA, R <sub>L</sub> =100ohm  | -                  | 7   | - kHz              |
|                                           | RESPONSE TIME (RISE)                 | t <sub>r</sub>       | V <sub>CE</sub> =2V, I <sub>C</sub> =20mA, R <sub>L</sub> =100ohm | -                  | 60  | 300 µS             |
|                                           | RESPONSE TIME (FALL)                 | t <sub>f</sub>       | V <sub>CE</sub> =2V, I <sub>C</sub> =20mA, R <sub>L</sub> =100ohm | -                  | 50  | 250 µS             |

I=INPUT, O=OUTPUT, T=TRANSFER CHARACTERISTICS.

| ABSOLUTE MAXIMUM RATINGS (Ta=25°C) |                             |                  |               |                  |
|------------------------------------|-----------------------------|------------------|---------------|------------------|
|                                    | PARAMETER                   | SYMBOL           | MAX           | UNITS            |
| I                                  | FORWARD CURRENT             | I <sub>F</sub>   | 50            | mA               |
|                                    | PEAK FORWARD CURRENT        | I <sub>FM</sub>  | 1             | A                |
|                                    | REVERSE VOLTAGE             | V <sub>R</sub>   | 6             | V                |
|                                    | POWER DISSIPATION           | P <sub>D</sub>   | 70            | mW               |
| O                                  | COLLECTOR-EMITTER VOLTAGE   | V <sub>CE0</sub> | 300           | V                |
|                                    | EMITTER-COLLECTOR VOLTAGE   | V <sub>ECO</sub> | 0.1           | V                |
|                                    | COLLECTOR CURRENT           | I <sub>C</sub>   | 150           | mA               |
|                                    | COLLECTOR POWER DISSIPATION | P <sub>C</sub>   | 200           | mW               |
|                                    | TOTAL POWER DISSIPATION     | P <sub>TOT</sub> | 200           | mW               |
|                                    | ISOLATION VOLTAGE 1 MIN.    | V <sub>ISO</sub> | 5000          | V <sub>RMS</sub> |
|                                    | OPERATING TEMP.             | T <sub>opr</sub> | - 30 TO + 100 | °C               |
|                                    | STORAGE TEMP.               | T <sub>stg</sub> | - 55 TO + 125 | °C               |
|                                    | SOLDERING TEMP.             | T <sub>sol</sub> | + 260         | °C               |
|                                    | 2.0mm FROM BODY             |                  | 10 SEC. MAX   |                  |

I=INPUT, O=OUTPUT.

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\*UNLESS OTHERWISE SPECIFIED TOLERANCE IS ±0.25mm (±0.010")

|                                                                                                              |             |                                                                                                                                                                                                                                                                                                                                                          |  |                              |             |                                                                                                      |
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| SIXTEEN PIN SURFACE MOUNT QUAD CHANNEL PHOTOCOUPLER,<br>PHOTODARLINGTON OUTPUT, NO EXTERNAL BASE CONNECTION. |             | RELIABILITY NOTE<br>OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.                                                                                                                                                               |  | DRAWN BY:                    | CHECKED BY: | APPROVED BY:                                                                                         |
|                                                                                                              |             |                                                                                                                                                                                                                                                                                                                                                          |  | TM/BC                        |             | DATE: 8-12-99<br>PAGE: 2 OF 2<br>SCALE: N/A                                                          |