

ULTRA-SCHNELLE FOTODIODEN  
 ULTRA-HIGH-SPEED-PHOTODIODES  
 Epitaxie-Fotodioden

| TYP    | AF<br>[mm <sup>2</sup> ] | S <sub>abs</sub><br>[A/W]<br>λ=820nm | I <sub>ro</sub><br>[nA]<br>U <sub>R</sub> =20V | t <sub>r</sub> , t <sub>f</sub> *)<br>[ns] | C <sub>tot</sub> **)<br>[pF] | Bauform      |
|--------|--------------------------|--------------------------------------|--|--|------------------------------|--------------|
| SP 101 | 1.9x1.9                  | 0.5                                  | 100  | 3.5  | 20.0                         | TO 5 mod. 1) |
| SP 102 | 0.5x0.5                  | 0.5                                  | 4  | 2.4  | 2.0                          | TO 18mod. 2) |
| SP 103 | 3.45x3.45                | 0.5                                  | 150  | 5.0  | 35.0                         | TO 5mod. 3)  |

\*) U<sub>R</sub>=20V, R<sub>L</sub>=50Ω

\*\*\*) U<sub>R</sub>=20V, f=1MHz

INFRAROT-OPTIMIERTE-FOTODIODEN  
 INFRARED-SENSITIVE-PHOTODIODES  
 Kompakt-Si-Fotodioden

| TYP      | AF<br>[mm <sup>2</sup> ] | λ <sub>max</sub><br>[nm] | S <sub>abs</sub><br>[A/W] | I <sub>ro</sub><br>[nA]<br>U <sub>R</sub> =10V | θ <sub>a</sub><br>[°C] | Bauform**) |
|----------|--------------------------|--------------------------|---------------------------|--|------------------------|------------|
| SP 106   | 2.75x2.75                | 900                      | 0.6                       | 1  | -25...+85              | HTS-KG 4)  |
| SP 126*) | 2.75x2.75                | 900                      | 0.5                       | 1  | -25...+85              | VTS-KG 5)  |
| SP 127   | 2.75x2.75                | 900                      | 0.5                       | 1  | -25...+85              | VTS-KG 5)  |
| SP 132   | 5.5x5.5                  | 850                      | 0.55                      | 10   | -15...+55              | LP-MG 8)   |
| SP 148   | 10.0x10.0                | 900                      | 0.6                       | 20   | -15...+55              | LP-MG 7)   |
| SP 128   | ∅ 20mm                   | 900                      | 0.6                       | 100  | -15...+70              | MG 8)      |
| SP 139   | ∅ 20mm                   | 900                      | 0.6                       | 100  | -15...+55              | LP-MG 9)   |

\*) mit Tageslichtsperrfilter

\*\*\*) HTS-KG = Horizontal-Trägerstreifen-Kunststoffgehäuse  
 VTS-KG = Vertikal-Trägerstreifen-Kunststoffgehäuse  
 LP-MG = Leiterplatten-Metallgehäuse  
 MG = Metallgehäuse

FARBSENSOR  
 COLOR-SENSOR  
 Kompakt-Si-Fotodiode

| TYP    | AF<br>[mm <sup>2</sup> ] | Δλ<br>[nm] | U <sub>Rmax</sub><br>[V] | θ <sub>a</sub><br>[°C] | Bauform       |
|--------|--------------------------|------------|--------------------------|------------------------|---------------|
| SP 131 | 2.75x2.75                | 450-900    | 5                        | -15...+55              | TO 39mod. 10) |

UV-OPTIMIERTE-FOTODIODEN  
 UV-SENSITIVE-PHOTODIODES  
 Kompakt-Si-Fotodioden

| TYP    | AF<br>[mm <sup>2</sup> ] | $\Delta\lambda$<br>[nm] | S <sub>abs</sub><br>[A/W]<br>$\lambda=200\text{nm}$ | I <sub>ro</sub><br>[nA]<br>U <sub>R</sub> =10V | $\theta_a$<br>[°C] | Bauform       |
|--------|--------------------------|-------------------------|---|--|--------------------|---------------|
| SP 134 | 2.75x2.75                | 190-1000                | 0.1   | 2  | -15...+55          | TO 39mod. 11) |
| SP 141 | 5.5x5.5                  | 190-1000                | 0.1   | 5  | -15...+50          | LP-MG 8)      |
| SP 129 | 10.0x10.0                | 190-1000                | 0.1   | 20   | -15...+70          | MG 12)        |
| SP 137 | 10.0x10.0                | 190-1000                | 0.1   | 20   | -15...+55          | LP-MG 7)      |

BLAU-OPTIMIERTE-FOTODIODEN  
 BLUE-SENSITIVE-PHOTODIODES  
 Kompakt-Si-Fotodioden

| TYP    | AF<br>[mm <sup>2</sup> ] | $\Delta\lambda$<br>[nm] | S <sub>abs</sub><br>[A/W]<br>$\lambda=340\text{nm}$ | I <sub>ro</sub><br>[nA]<br>U <sub>R</sub> =10V | $\theta_a$<br>[°C] | Bauform       |
|--------|--------------------------|-------------------------|---|--|--------------------|---------------|
| SP 135 | 2.75x2.75                | 250-1000                | 0.18  | 2  | -15...+55          | TO 39mod. 11) |
| SP 136 | 5.5x5.5                  | 250-1000                | 0.18  | 5  | -15...+55          | LP-MG 8)      |
| SP 130 | 10.0x10.0                | 250-1000                | 0.18  | 20   | -15...+70          | MG 12)        |
| SP 138 | 10.0x10.0                | 250-1000                | 0.18  | 20   | -15...+55          | LP-MG 7)      |

V[λ]-FOTODIODEN  
 EYE-RESPONSE-PHOTODIODES  
 Epitaxie-Fotodioden

| TYP    | AF<br>[mm <sup>2</sup> ] | $\lambda_{\text{max}}$<br>[nm] | S <sub>abs</sub><br>[A/W]<br>U <sub>R</sub> =10mV | I <sub>ro</sub><br>[pA] | $\theta_a$<br>[°C] | Bauform    |
|--------|--------------------------|--------------------------------|---|-------------------------|--------------------|------------|
| SP 105 | 1.9x1.9                  | 555                            | 0.3   | 1.6                     | -25...+70          | HTS-KG 13) |
| SP 133 | 5.5x5.5                  | 555                            | 0.25  | 20.0                    | -15...+55          | LP-MG 8)   |

POSITIONSEMPFINDLICHE FOTODIODEN  
 POSITION-SENSITIVE-DETECTORS  
 Epitaxie-Fotodioden

| TYP                          | AF<br>[mm <sup>2</sup> ] | $\lambda_{max}$<br>[nm] | I <sub>RO</sub><br>[nA]<br>U <sub>R</sub> =20V | t <sub>r</sub> , t <sub>f</sub><br>[µs] | $\theta_a$<br>[°C] | Bauform           |
|------------------------------|--------------------------|-------------------------|--|---|--------------------|-------------------|
| SP 116<br>Differenz-FD       | 1.74(2x)                 | 700                     | 0.1  | 0.04                                    | -15...+55          | HTS-KG 14)        |
| SP 117<br>Quadranten-FD      | 1.04(4x)                 | 700                     | 0.1  | 0.04                                    | -15...+55          | HTS-KG 15)        |
| SP 119*)<br>Duolateral-FD    | 10.0x10.0                | 900                     | 200  | 5                                       | -15...+70          | MG 16)            |
| SP 121*)<br>Streifen-FD      | 2.1x29.4                 | 850                     | 200  | 60                                      | -15...+70          | MG 17)            |
| SP 123<br>Kreis-Kreisring-FD | 0.283(2x)                | 700                     | 0.1  | 0.04                                    | -15...+55          | HTS-KG 18)        |
| SP 124<br>Kreis-Kreisring-FD | 3.14 (2x)                | 700                     | 0.3  | 0.04                                    | -15...+55          | TO 39 19)<br>mod. |

\*) Kompakt-Si-Fotodioden

DETEKTOREN FÜR LWL-ANWENDUNGEN  
 DETECTORS FOR FIBRE-OPTIC COMMUNICATIONS  
 Epitaxie-Fotodioden

| TYP                      | AF<br>(Ø [mm]) | $\lambda_{max}$<br>[nm] | S <sub>abs</sub><br>[A/W] | C <sub>tot</sub><br>[pF]<br>U <sub>R</sub> =20V | $\theta_a$<br>[°C] | Bauform*) |
|--------------------------|----------------|-------------------------|---------------------------|---|--------------------|-----------|
| SP 104**)<br>APD-LLNUe   | 0.22           | 800                     | 0.4                       | 0.6   | -15...+55          | LWLG 20)  |
| SP 107<br>PIN-FD-LLKUe   | 0.7            | 820                     | 0.5                       | 2.5   | -40...+70          | BG1 21)   |
| SP 107-1<br>PIN-FD-LLKUe | 0.7            | 820                     | 0.5                       | 2.5   | -40...+70          | BG2 22)   |
| SP 109<br>PIN-FD-LLNUe   | 0.22           | 800                     | 0.4                       | 0.6   | -15...+55          | LWLG 20)  |

\*\*\*)

\*) LWLG = modifizierter TO 39 mit Lichtleiter-Pigtail  
 BG1 = Buchsengehäuse (Zoll-Gewinde)  
 BG2 = Buchsengehäuse (metrisches Gewinde)

\*\*\*) M = 200, U<sub>R</sub>=100V

\*\*\*) t<sub>r</sub>, t<sub>f</sub> = 200ps

LLNUe = Lichtleiter-Nachrichten-Übertragung  
 LLKUe = Lichtleiter-Kurzstrecken-Übertragung

AVELANCHE-FOTODIODE  
AVELANCHE-PHOTODIODE  
 Epitaxie-Fotodiode

| TYP    | AF<br>(Ø [mm]) | S <sub>abs</sub><br>[A/W]<br>λ=820nm | I <sub>ro</sub><br>[nA]<br>M=100 | U <sub>B</sub><br>[V]<br>M=100 | C <sub>tot</sub> *)<br>[pF] | Bauform       |
|--------|----------------|--------------------------------------|----------------------------------|--------------------------------|-----------------------------|---------------|
| SP 114 | 0.22           | 0.4                                  | 0.5                              | 140...300                      | 0.6                         | TO 39mod. 23) |

\*) U<sub>R</sub>=100V, f=1MHz

TEILCHENDETEKTOREN  
CHARGED-PARTICLE-DETECTORS  
 Kompakt-Si-Fotodioden

| TYP             | DF<br>[mm <sup>2</sup> ] | I <sub>ro</sub><br>[nA]<br>U <sub>R</sub> =5V | C <sub>tot</sub><br>[nF]<br>U <sub>R</sub> =2V | U <sub>Rmax</sub><br>[V] | Θ <sub>a</sub><br>[°C] | Bauform   |
|-----------------|--------------------------|---|--|--------------------------|------------------------|-----------|
| SP 04<br>α-Det. | Ø 35mm                   | 100   | 8.0  | 5                        | -15...+55              | LP-MG 24) |
| SP 05<br>α-Det. | Ø 20mm                   | 50  | 1.5  | 5                        | -15...+55              | LP-MG 25) |
| SP 06<br>α-Det. | Ø 5.5mm                  | 5   | 0.3  | 5                        | -15...+55              | LP-MG 26) |

SILIZIUM-FOTOTRANSISTOR-CHIPS  
SILICON-PHOTOTRANSISTOR-CHIPS

| Chip-Typ | AF<br>[mm <sup>2</sup> ] | λ <sub>max</sub><br>[nm] | I <sub>CE0max</sub><br>[nA]<br>U <sub>CE0</sub> =20V | U <sub>CE0</sub><br>[V] | I <sub>Cmax</sub> *)<br>[mA] | t <sub>r</sub> , t <sub>f</sub> **)<br>[µs]<br>I <sub>C</sub> =2mA |
|----------|--------------------------|--------------------------|--|-------------------------|------------------------------|--|
| SP 20XM  | 0.62x0.51                | 800                      | 50(10V)  | 35(70)                  | 1.0-10.0                     | 10   |
| SP 213XM | 0.37x0.37                | 850                      | 100  | 50(70)                  | 1.0-10.0                     | 10   |

\*) E<sub>v</sub>=1KLx, U<sub>CE</sub>=25V; in IC-Klassen

\*\*\*) U<sub>CE</sub>=20V, R<sub>L</sub>=1KΩ



