

# 3.96 or 4.00 × 4.4mm GRID PATTERN CR7 SERIES DUAL LINE CONNECTORS

## General

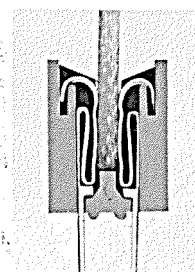
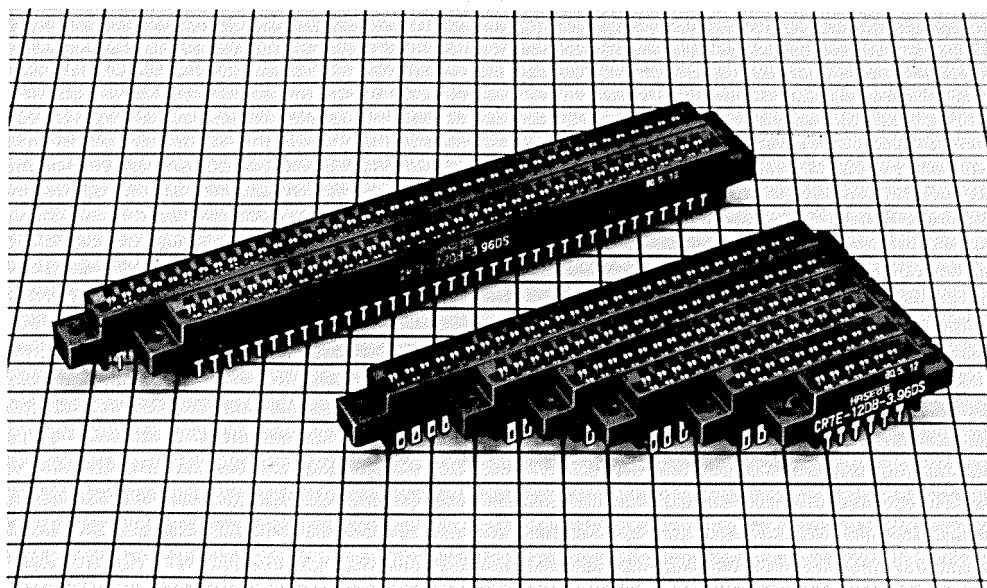
CR7 series are 3.96 or 4.00mm centers dual line connectors featuring bellows contacts of 8 contact points in 2 steps which offer excellent electrical and mechanical characteristics. 12, 20, 30, 36, 44, 56, 72, and 80 pin in 3.96mm

centers and 20, 28, 36, 44, and 56 pin in 4.00mm centers are line-uped with Solder Eyelet or Dip Solder terminals. A polarizing key is available for protection of coupling errors.

## Material and Finish

Molding : UL94V-0 Glass-reinforced Polycarbonate, Blue

Contact : Phosphor Bronze, (1) Whole gold plating over nickel or (2) Selective gold plating and solder over nickel

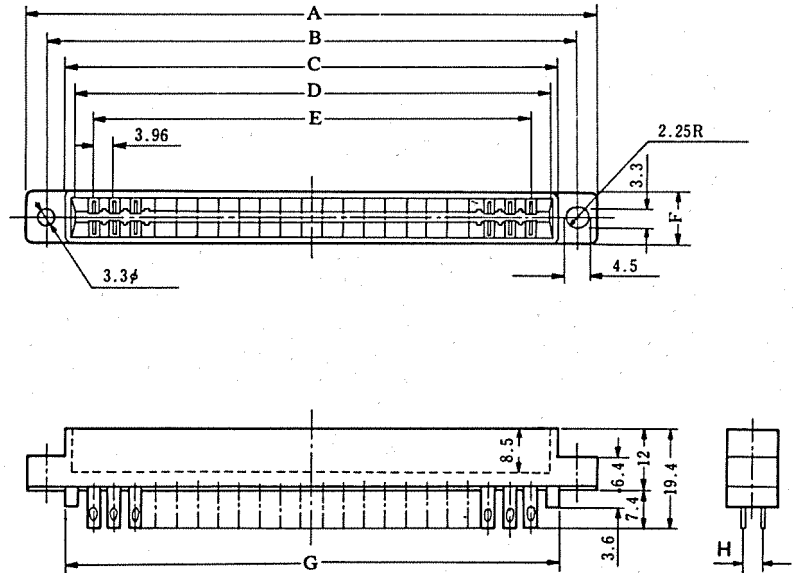
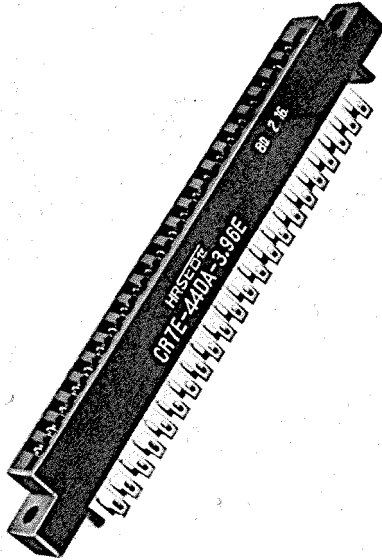


## Electrical and Environmental Performance

|                                |                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------|
| Current Rating                 | : 3A                                                                                         |
| Voltage Rating                 | : AC600V, DC850V                                                                             |
| Insulation Resistance          | : 5000MΩ MIN at DC500V                                                                       |
| Contact Resistance             | : 15mΩ MAX at DC1A                                                                           |
| Voltage Withstanding           | : AC1800V for a minute                                                                       |
| Insertion and Extraction Force | : 57—450grs/contact at 1.575 <sup>±0.002</sup> mm steel gauge                                |
| Humidity                       | : MIL-STD-202, Insulation Resistance 1000MΩ MIN at 40 <sup>±2</sup> °C, 90—95%, and 96 hours |
| Vibration                      | : MIL-STD-202, No visual damage nor looseness of parts at 10—55Hz with 1.5mm amplitude       |
| Shock                          | : MIL-STD-202, No visual damage nor looseness of parts at 50G in 3 directions                |
| Temperature Cycling            | : MIL-STD-202, No visual damage at -55 to +85°C                                              |
| Durability                     | : Contact Resistance 15mΩ MAX after 500 times consecutive coupling operation                 |
| Salt Spray                     | : MIL-STD-202, No heavy corrosion at 5%, 35°C Salt Water spray for 48 hours                  |
| Low Level Circuit              | : MIL-C-21097, Contact Resistance 15mΩ MAX at DC1mA                                          |

# 1. 3.96mm Centers Type

mm



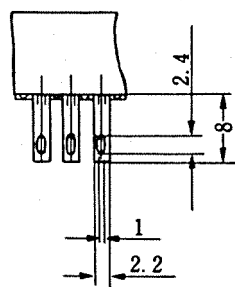
CR7E-44DA-3.96E

mm

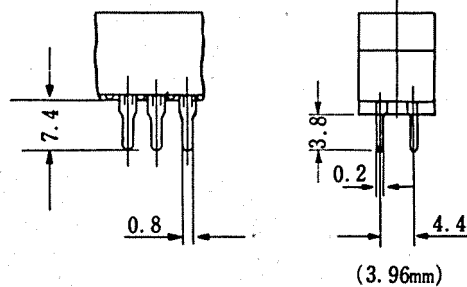
| No. of pin | Part No.           |                         | Terminals  | A     | B     | C     | D     | E      | F    | G     | H   |
|------------|--------------------|-------------------------|------------|-------|-------|-------|-------|--------|------|-------|-----|
|            | Wholly Gold Plated | Selectively Gold Plated |            |       |       |       |       |        |      |       |     |
| 12         | CR7E-12DA-3.96E    | CR7E-12DB-3.96E         | Eyelet     | 47    | 38.9  | 30.7  | 28    | 19.8   | 9    | 29.7  | 4.0 |
|            | CR7E-12DA-3.96DS   | CR7E-12DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 20         | CR7E-20DA-3.96E    | CR7E-20DB-3.96E         | Eyelet     | 63    | 54.8  | 47.3  | 43.8  | 35.64  | 9    | 46.3  | 4.0 |
|            | CR7E-20DA-3.96DS   | CR7E-20DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 30         | CR7E-30DA-3.96E    | CR7E-30DB-3.96E         | Eyelet     | 82.5  | 74.6  | 67.2  | 63.6  | 55.44  | 9    | 66.2  | 4.0 |
|            | CR7E-30DA-3.96DS   | CR7E-30DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 36         | CR7E-36DA-3.96E    | CR7E-36DB-3.96E         | Eyelet     | 94.4  | 86.5  | 79    | 75.5  | 67.32  | 9    | 78    | 4.0 |
|            | CR7E-36DA-3.96DS   | CR7E-36DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 44         | CR7E-44DA-3.96E    | CR7E-44DB-3.96E         | Eyelet     | 110.2 | 102.4 | 95    | 91.4  | 83.16  | 9    | 94    | 4.0 |
|            | CR7E-44DA-3.96DS   | CR7E-44DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 56         | CR7E-56DA-3.96E    | CR7E-56DB-3.96E         | Eyelet     | 133.7 | 126   | 118.1 | 115   | 106.98 | 11.1 | 117.1 | 4.0 |
|            | CR7E-56DA-3.96DS   | CR7E-56DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 72         | CR7E-72DA-3.96E    | CR7E-72DB-3.96E         | Eyelet     | 166   | 158   | 150   | 146.8 | 138.68 | 11.1 | 149   | 4.0 |
|            | CR7E-72DA-3.96DS   | CR7E-72DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |
| 80         | CR7E-80DA-3.96E    | CR7E-80DB-3.96E         | Eyelet     | 182   | 174   | 166   | 162.7 | 154.53 | 11.1 | 165   | 4.0 |
|            | CR7E-80DA-3.96DS   | CR7E-80DB-3.96DS        | Dip Solder |       |       |       |       |        |      |       | 4.4 |

## Terminals

mm



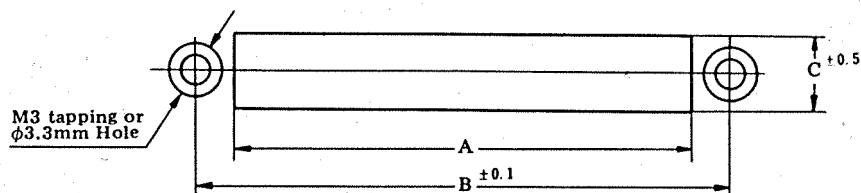
(1) Eyelet



(2) Dip Solder

## Mounting Cutout

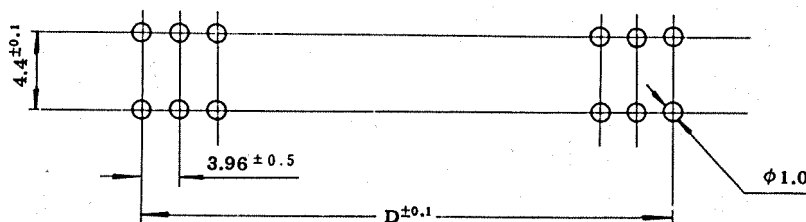
mm



| No. of pin | 12   | 20   | 30   | 36   | 44    | 56    | 72    | 80    |
|------------|------|------|------|------|-------|-------|-------|-------|
| A          | 32.5 | 48.3 | 68.2 | 80.0 | 96.0  | 119.1 | 151.0 | 167.0 |
| B          | 38.9 | 54.8 | 74.6 | 86.5 | 102.4 | 126.0 | 158.0 | 174.0 |
| C          |      |      | 10   |      |       | 12    |       |       |

## Dip Soldering Pattern

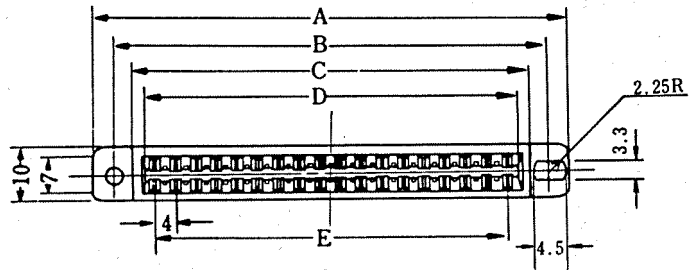
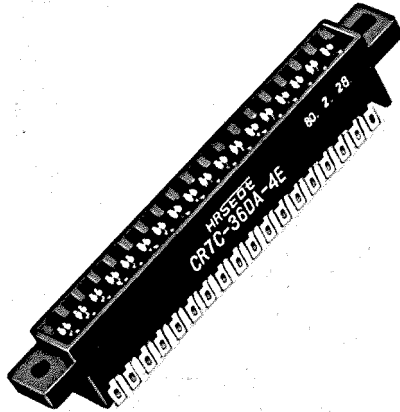
mm



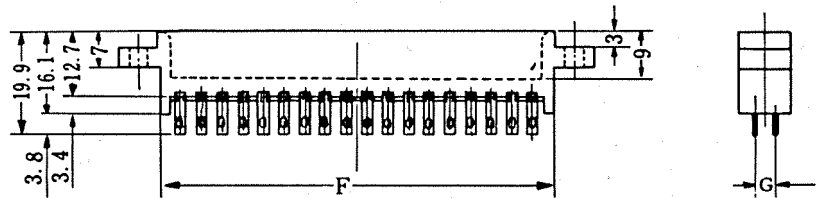
| No. of pin | 12   | 20    | 30    | 36    | 44    | 56     | 72     | 80     |
|------------|------|-------|-------|-------|-------|--------|--------|--------|
| D          | 19.8 | 35.64 | 55.44 | 67.32 | 83.16 | 106.98 | 138.68 | 154.53 |

## 2. 4.00mm Centers Type

mm



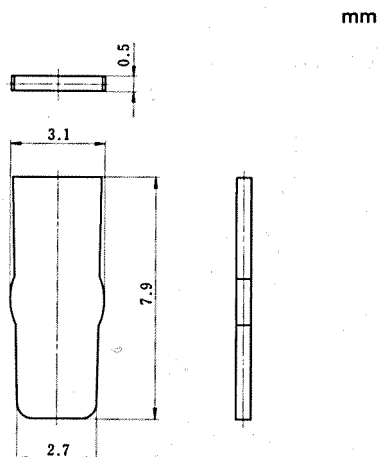
CR7C-36DA-4E



mm

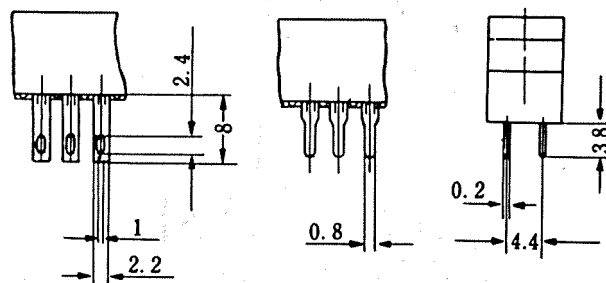
| No. of pin | Part No.           |                         | Terminals  | A   | B   | C   | D     | E   | F   | G   |
|------------|--------------------|-------------------------|------------|-----|-----|-----|-------|-----|-----|-----|
|            | Wholly Gold Plated | Selectively Gold Plated |            |     |     |     |       |     |     |     |
| 20         | CR7C-20DA-4E       | CR7C-20DB-4E            | Eyelet     | 58  | 50  | 43  | 41    | 36  | 43  | 4.0 |
|            | CR7C-20DA-4DS      | CR7C-20DB-4DS           | Dip Solder |     |     |     |       |     |     | 4.4 |
| 28         | CR7C-28DA-4E       | CR7C-28DB-4E            | Eyelet     | 75  | 67  | 60  | 57    | 52  | 59  | 4.0 |
|            | CR7C-28DA-4DS      | CR7C-28DB-4DS           | Dip Solder |     |     |     |       |     |     | 4.4 |
| 36         | CR7C-36DA-4E       | CR7C-36DB-4E            | Eyelet     | 92  | 84  | 77  | 73    | 68  | 76  | 4.0 |
|            | CR7C-36DA-4DS      | CR7C-36DB-4DS           | Dip Solder |     |     |     |       |     |     | 4.4 |
| 44         | CR7C-44DA-4E       | CR7C-44DB-4E            | Eyelet     | 109 | 101 | 93  | 89    | 84  | 93  | 4.0 |
|            | CR7C-44DA-4DS      | CR7C-44DB-4DS           | Dip Solder |     |     |     |       |     |     | 4.4 |
| 56         | CR7C-56DA-4E       | CR7C-56DB-4E            | Eyelet     | 133 | 125 | 117 | 113.5 | 108 | 117 | 4.0 |
|            | CR7C-56DA-4DS      | CR7C-56DB-4DS           | Dip Solder |     |     |     |       |     |     | 4.4 |

## Polarizing Key



| Part No.  | Material          |
|-----------|-------------------|
| CR7C-GPIN | Polyacetal, White |

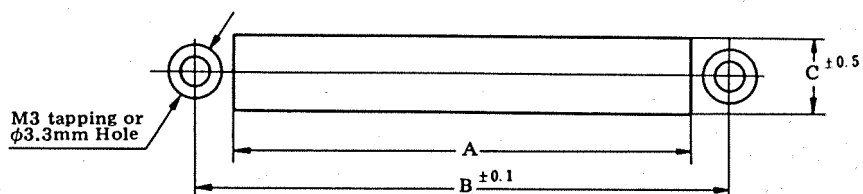
## Terminals



(1)Eyelet

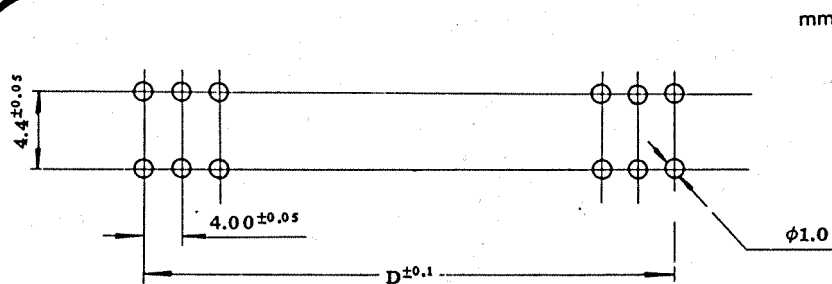
(2)Dip Solder

## Mounting Cutout



| No. of pin | 20   | 28 | 36 | 44  | 56   |
|------------|------|----|----|-----|------|
| A          | 44   | 61 | 78 | 94  | 118  |
| B          | 50   | 67 | 84 | 101 | 125  |
| C          | 11.5 |    |    |     | 11.0 |

## Dip Soldering Pattern



| No. of pin | 20 | 28 | 36 | 44 | 56  |
|------------|----|----|----|----|-----|
| D          | 36 | 52 | 68 | 84 | 108 |