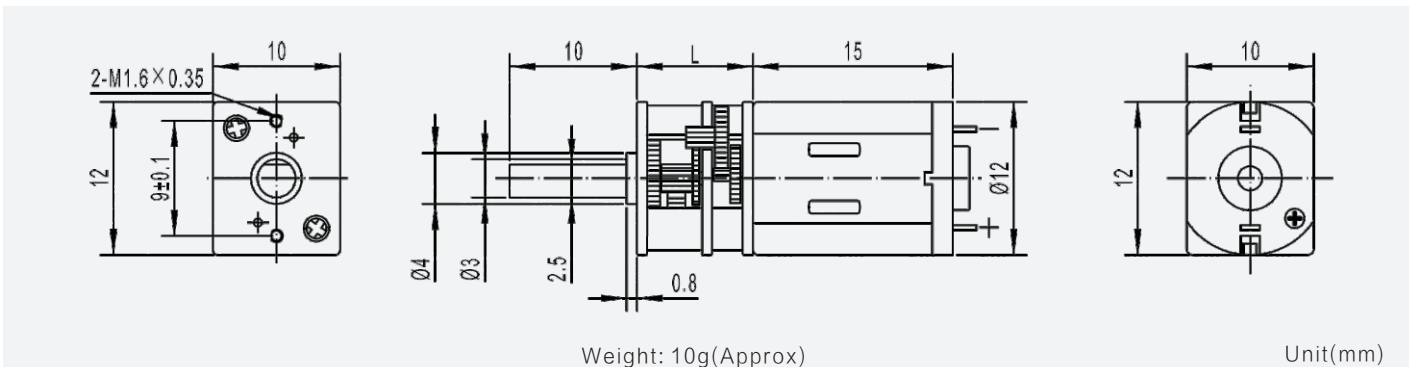
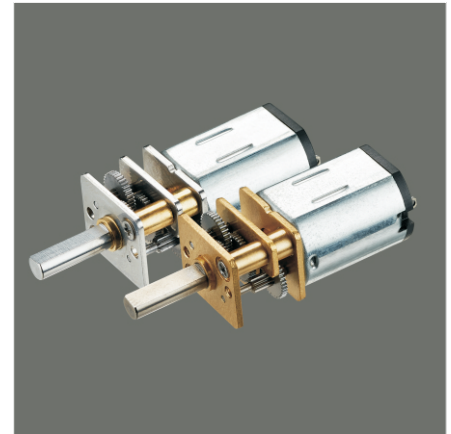


GM12-N20VA

12mm gearbox plus N20 permanent magnet DC motor

| | | | | |
|--|---------------|-----------------------------------|--|--------|
| Module | 0.15 | | | |
| Rated torque (kg.cm) | 0.5 kg.cm max | | | |
| Max momentary tolerance torque (kg.cm) | 1.0 kg.cm max | | | |
| Reduction ratio | 1/10 | 1/20, 1/30 1/50, 1/63 1/100 | 1/110, 1/150 1/210, 1/250 1/298, 1/380 | 1/1000 |
| Number of gear stages | 2 | 4 | 5 | 7 |
| Gearbox length L (mm) | 9.0 | | 12.0 | |



Gear Motor Technical Data

| Reduction ratio | | 10 | 30 | 50 | 100 | 150 | 210 | 250 | 298 | 380 | 1000 |
|-----------------|---------------------|-------|------|------|------|------|------|------|------|-----|------|
| 2.4V | No-load speed(rpm) | 1450 | 470 | 285 | 145 | 96 | 69 | 58 | 50 | 38 | 14.5 |
| | Rated speed(rpm) | 1200 | 400 | 240 | 120 | 80 | 57 | 48 | 40 | 31 | 12 |
| | Rated torque(kg.cm) | 0.015 | 0.05 | 0.07 | 0.15 | 0.22 | 0.31 | 0.37 | 0.45 | 0.5 | 0.5 |
| 5.0V | No-load speed(rpm) | 1450 | 470 | 285 | 145 | 96 | 69 | 58 | 50 | 38 | 14.5 |
| | Rated speed(rpm) | 1200 | 400 | 240 | 120 | 80 | 57 | 48 | 40 | 31 | 12 |
| | Rated torque(kg.cm) | 0.015 | 0.05 | 0.07 | 0.15 | 0.22 | 0.31 | 0.37 | 0.45 | 0.5 | 0.5 |

Motor Technical Data

| Motor model | Rated voltage | No-load | | Rated | | | Stall | | |
|-----------------|---------------|---------|---------|-------|--------|---------|-------|--------|---------|
| | | Speed | Current | Speed | Torque | Current | Power | Torque | Current |
| | VDC | r/min | mA | r/min | g.cm | mA | W | g.cm | A |
| TFF-N20VA-13110 | 2.4 | 14800 | 60 | 12100 | 2.5 | 260 | 0.31 | 14 | 1.20 |
| TFF-N20VA-09220 | 5.0 | 14800 | 30 | 12000 | 2.5 | 120 | 0.31 | 13 | 0.52 |

