Level 2

|  |  |
| --- | --- |
| *Module* | DC Brushed Motor (model: TRS-775W) |
| *Inputs* | - User Control: on/off  - Battery (funneled through Switch)  \* 12 DCV |
| *Outputs* | Up to 5500 RPM |
| *Functionality* | Used to rotate the armature |

|  |  |
| --- | --- |
| *Module* | Battery (Base) |
| *Inputs* | None |
| *Outputs* | - 12 V for motor  - 1.5 V for IR Emitter |
| *Functionality* | Used to power the Motor and IR Sensor |

Found: Normal batteries found anywhere

|  |  |
| --- | --- |
| *Module* | Battery (Arm) |
| *Inputs* | None |
| *Outputs* | - 9 V for Microcontroller (through switch)  - 9 V for the LEDs  - 1.5 V for IR Reciever |
| *Functionality* | Used to power the Microcontroller and LEDs |

motor:

The DC Brushed Motor we are going to use is going to accept 2 inputs, and provide 1 output. The motor is going to accept power from the battery and user control in the form of an on/off switch. When the motor is turned on it will take the power from the battery and generate the circular motion and speed the arm of the LED wand requires.

Battery

There will be two separate modules supplying power to the system. One of them will be supplying power to the motor and the IR sensor and the second one will be supplying it to the arm. The battery module will take no input, but rather simply provide power output to the motor and IR sensor as it is required based on the status of the switch.

Level 1

|  |  |
| --- | --- |
| *Module* | DC Brushed Motor (model: TRS-775W) |
| *Inputs* | - Battery (12 DCV) |
| *Outputs* | Up to 5500 RPM |
| *Functionality* | Used to rotate the armature |

|  |  |
| --- | --- |
| *Module* | Battery |
| *Inputs* | None |
| *Outputs* | - 12 V for motor  -9V for Controller |
| *Functionality* | Used to power the Motor and Microcontroller |

Found: Normal batteries found anywhere

motor:

For Level 1 the DC Brushed Motor that’s being used will accept a battery input of 12 DCV and provide an output of up to 5500 RPM. The RPMs are variable based on the input current. It’s assumed to be at max input current from 12 DCV. The output of the motor will provide the spin for the armature which will display the image that was input into the E-Wand.

Battery

The battery will have no input. However, it will supply the power that is needed by the motor and the microcontroller. This means the battery will have two outputs.

Found: <http://www.ebay.com/itm/Micro-small-dc-motor-12vdc-5500rpm-high-torque-brush-motor-/221231311892?_trksid=p2054897.l4275>