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Assignment 2: Engineering Specifications

Weighted Comparison Chart:

|  | Range | Operating Time | Portable | Total | Weight |
| --- | --- | --- | --- | --- | --- |
| Range | 1 | 2 | 1/2 | 3.5 | .33 |
| Operating Time | 1/2 | 1 | 1/2 | 2 | .20 |
| Portable | 2 | 2 | 1 | 5 | .47 |



Engineering Specifications:

Range - 1 Operating Time - 5 Portable - 9

Color - 2 Day & Night - 6 Lightweight - 10

Zoom in - 3 12 hours - 7 Small - 11

High Resolution - 4 Battery Powered - 8 Wearable - 12

| Objective | Engineering Requirement | Justification |
| --- | --- | --- |
| 9, 10, 11, 12, 8 | System weight must not exceed 8 pounds | Average human head weighs 11 pounds |
| 1, 3, 4 | Must be able to see upto half mile away | Length of intersections |
| 5, 6, 7, 8 | Must be able to operate day and night as well as 12 hours | Contact lenses last from 8 to 12 hours |
| 12 | Must be able to have it on at all times | Need to visually see at all times |

Sources:

<https://www.gwosteopathy.co.uk/much-head-weigh/>

<https://www.quora.com/How-much-does-an-average-human-head-weigh>

<https://www.gtcmpo.org/sites/default/files/pdf/2007/IntersectionSpacing-TrafficSignalSpacing.pdf>

<https://www.allaboutvision.com/contacts/faq/contacts-wear-time/>

<https://www.webmd.com/eye-health/picture-of-the-eyes>