



Optimax Value Proposition and Total Cost of Ownership

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Optimax provides quick reliable delivery of precision optical components. Our tag line is “Prototype Optics in 1 week!” and we have been fulfilling that value proposition for more than 10 years.

Optimax strives to create value in every process, with every part, for every customer. Our commitment to small volume, high quality, and quick delivery is more than just a statement. Optimax takes ownership of each job received and is driven to create value that our customers can leverage to satisfy market needs and build wealth. On-time delivery, reliable quality and prosperity are just as important to us as they are to our customers. Like most products, optics can be considered to have a lifespan. When a part is first coming off the manufacturing floor and is sent to the customer, it is in its early stages; where optics, like fruit, damage easily. Once the part has been installed it enters a stage of stability where failure rate is very low and remains constant. After experiencing years of wear, the third stage begins and product failure begins to increase. A part that is rejected is most likely going to be discovered in the early stages of its lifespan. Key causes of these early failures are inferior material, manufacturing defects, poor workmanship, and poor handling as the part goes through each phase of manufacturing and delivery. These issues can be minimized by addressing the robustness of the process and increasing product reliability.

Higher quality comes at a cost that can be overcome when considering the total cost of ownership. In order to increase the reliability of the product, the design and manufacturing costs increase causing the initial cost of the product to be higher. However, over the lifespan of the product the total cost may be lower. Total cost of ownership requires consideration of replacement parts, rework, project failure, vendor management (administrative time, travel, unexpected shipping), and loss of future business. By investing in a higher quality process in the beginning, total cost decreases as supporting costs become less necessary. The price of a manufactured optic is not measured when the part gets shipped; it is a continuous calculation of expenses added up over the lifespan of the part. This is called total cost ownership.

At Optimax, we understand that the value we add to each order goes beyond the unit price. Product performance (over the part’s entire lifespan), quality (number of rejected parts) and risk (on-time delivery) are all factors. For an accurate calculation, total cost of a part must be multiplied by variables for performance, reject rate and on-time delivery. Here is an example for computing the total cost of ownership:

$$\text{Total Cost} = \text{Unit Price} * p(\text{Performance}) * q(\text{Quality}) * r(\text{On-time Delivery})$$

	Very Good	Good	Poor	Bad	“Low Cost”	“High Cost”
Unit Price	100	100	100	100	50	100
Performance	98.0	95.0	90.0	75.0	75	98
Quality (Reject %)	3.0	8.0	12.0	30.0	30	3
Risk (On-Time)	95.0	85.0	75.0	60.0	60	95
Total Cost	110.31	130.41	130.41	227.50	113.75	110.31

In this example, when purchasing a product with the greatest reliability total cost is at its lowest even though initial cost may be at its highest. Taking ownership of the product is important for evaluating what type of investment to make. A combination of strategic planning and vendor communication will most likely lead to the conclusion that maximizes the likelihood for project success. These variables may need to be weighted depending upon the requirements of the project, for example late delivery may mean that resources are standing idle costing \$1000 or late delivery may mean complete failure of the project – e.g. product display at a trade show. Optimax stands on this principle of total ownership in order to provide each customer with a cost effective and high quality experience that maximizes project success.