

**LED Light Assembling -  
Market Survey cum  
Detailed Techno Economic  
Feasibility Project Report**

# Introduction

A light emitting diode (LED) is a device which converts electrical energy into light. LEDs are preferred light sources for short distance (local area) optical fiber network because they are inexpensive,

robust and have long life (the long life of an LED is primarily due to its being a cold device, i.e. its operating temperature being much lower than that of, say, an incandescent lamp), can be modulated (i.e. switched on and off) at high speeds.

A light-emitting diode (LED) is a two-lead semiconductor light source. It is a p-n junction diode, which emits light when activated. When a suitable voltage is applied to the leads, electrons are able to recombine with electron holes within the device, releasing energy in the form of photons.

This effect is called electroluminescence, and the color of the light (corresponding to the energy of the photon) is determined by the energy band gap of the semiconductor.

LEDs primarily offer advances in efficiency, controllability, and life span.

The key strength of LED lighting is reduced power consumption. LED's are available with at the most Lumen efficiency of 110 Lm/Watt compared to 65-80 Lm/Watt of CFL and FTL, 45 Lm/Watt of Mercury vapour and 75 Lm/Watt of metal halide or 94 Lm/Watt of Sodium Vapour.

LED tube light could replace for traditional fluorescent tubes in the following places like hotels, hospitals, factories/offices, commercial complexes conference/ meeting rooms, schools/colleges/universities, residential/institution buildings. Thus, due to demand it is a good project for entrepreneurs to invest.

# PROJECT AT A GLANCE



PROJECT AT A GLANCE				(` in lacs)			
COST OF PROJECT				MEANS OF FINANCE			
Particulars	Existing	Proposed	Total	Particulars	Existing	Proposed	Total
Land & Site Development Exp.	0.00	0.00	0.00	Capital	0.00	5.92	5.92
Buildings	0.00	0.00	0.00	Share Premium	0.00	0.00	0.00
Plant & Machineries	0.00	8.20	8.20	Other Type Share Capital	0.00	0.00	0.00
Motor Vehicles	0.00	2.00	2.00	Reserves & Surplus	0.00	0.00	0.00
Office Automation Equipments	0.00	5.25	5.25	Cash Subsidy	0.00	0.00	0.00
Technical Knowhow Fees & Exp.	0.00	2.00	2.00	Internal Cash Accruals	0.00	0.00	0.00
Franchise & Other Deposits	0.00	0.00	0.00	Long/Medium Term Borrowings	0.00	17.76	17.76
Preliminary & Pre-operative Exp	0.00	0.50	0.50	Debentures / Bonds	0.00	0.00	0.00
Provision for Contingencies	0.00	0.80	0.80	Unsecured Loans/Deposits	0.00	0.00	0.00
Margin Money - Working Capital	0.00	4.93	4.93				
<b>TOTAL</b>	<b>0.00</b>	<b>23.68</b>	<b>23.68</b>	<b>TOTAL</b>	<b>0.00</b>	<b>23.68</b>	<b>23.68</b>





# PROJECT AT A GLANCE



Year	Annualised		Book Value	Debt	Dividend	Retained Earnings		Payout	Probable Market Price	P/E Ratio	Yield Price/ Book Value
	EPS	CEPS				Per Share	Per Share				
						%		%		No. of Times	%
1-2	2.57	6.75	12.57	24.00	0.00	100.00	2.57	0.00	2.57	1.00	0.00
2-3	7.69	11.33	20.27	18.00	0.00	100.00	7.69	0.00	7.69	1.00	0.00
3-4	12.44	15.61	32.71	12.00	0.00	100.00	12.44	0.00	12.44	1.00	0.00
4-5	16.67	19.45	49.38	6.00	0.00	100.00	16.67	0.00	16.67	1.00	0.00
5-6	20.32	22.76	69.70	0.00	0.00	100.00	20.32	0.00	20.32	1.00	0.00



# PROJECT AT A GLANCE

Year	D. S. C. R.			Debt / - Deposits Debt	Equity as- Equity	Total Net Worth	Return on Net Worth	Profitability Ratio					Assets Turnover Ratio	Current Ratio
	Individual	Cumulative	Overall					GPM	PBT	PAT	Net Contributio n	P/V Ratio		
	(Number of times)			(Number of times)		%	%	%	%	%	%			
Initial				3.00	3.00									
1-2	1.08	1.08		1.91	1.91	4.37		11.72%	1.19%	1.03%	60.30	40.85%	3.87	1.08
2-3	1.62	1.34		0.89	0.89	2.65		13.60%	3.95%	2.65%	69.45	40.33%	4.09	1.20
3-4	2.22	1.61	2.16	0.37	0.37	1.60		14.81%	5.81%	3.74%	79.35	40.32%	4.02	1.39
4-5	2.88	1.88		0.12	0.12	1.04		15.56%	7.01%	4.46%	89.25	40.31%	3.79	1.61
5-6	3.60	2.16		0.00	0.00	0.72		15.98%	7.73%	4.89%	99.15	40.30%	3.52	2.08



# PROJECT AT A GLANCE

## BEP

BEP - Maximum Utilisation Year	5
Cash BEP (% of Installed Capacity)	79.21%
Total BEP (% of Installed Capacity)	80.67%

## IRR, PAYBACK and FACR

Internal Rate of Return .. ( In %age )	29.66%
Payback Period of the Project is ( In Years )	2 Years 4 Months
Fixed Assets Coverage Ratio ( No. of times )	28.026



# Table of Contents of the Project Report



# 1. Thane: District Profile & Geotechnical Site Characterization

- 1.1. General
- 1.2. Geography
- 1.3. Climate
- 1.4. Demographics
- 1.5. Economy
- 1.6. Transport
- 1.7. Map

## 2. Introduction

- 2.1. Directional - Reflector Led Lamps
- 2.2. Conversion Kits & Down Lights
- 2.3. Exit Lamps
- 2.4. Miniatures

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### **5. Uses & Applications**

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#### **5.2. Electrical Polarity**

#### **5.3. Safety and Health**

## **6. B.I.S. Specifications**

**6.1. 16101: 2012 General Lighting—LEDs and LED modules; Terms and Definitions.**

**6.2. 16103 (Part 1): 2012 Led Modules for General Lighting Part 1 Safety Requirements.**

**6.3. 16105: 2012 Method of Measurement of Lumen Maintenance of Solid State Light (LED) Sources.**

**6.4. 16108: 2012 Photobiological Safety of Lamps and Lamp Systems.**

## **7. Market Survey**

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**7.2. Lamps**

**7.3. Market Structure**

- 7.4. Leading Brands
- 7.5. Compact Fluorescent Lamps
- 7.6. Fluorescent Tubes

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- 8.1. About Financial Statements of CMIE Database
- 8.2. Profits & Appropriations
- 8.3. Total Liabilities
- 8.4. Total Assets
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- 8.6.3. Plant Capacity**
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- 8.7.1. Assets**
- 8.7.2. Cash Flow**
- 8.7.3. Cost as % ge of Sales**
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- 8.7.7. Income & Expenditure**

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- 9.2. Import Statistics Data for Light Emitting Diodes (LED)

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## 11.1. Parts of an LED Light

# 12. Assembling Process Flow Diagram

# 13. Steps for Assembling

# 14. Types of LED

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## 14.2. Mid-Range

## 14.3. High-Power

## 14.4. AC Driven LED

# 15. Suppliers of Plant & Machinery

## **16. Suppliers of Raw Material**

## **17. Product, Raw Material & Assembling Unit Photographs**

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## **18. Quotation of Plant, Machinery and Equipments from Supplier**

**Niir Project Consultancy Services (NPCS)**  
**can provide Detailed Project Report on**  
**LED Light Assembling**

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# ***NIIR PROJECT CONSULTANCY SERVICES***

**An ISO 9001:2008 Company**



# Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*



# What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*



# How are we different ?



- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*



# Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

# Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
- *Non-profit Organizations, NBFC's*
- *Educational Institutions*
- *Embassies & Consulates*
- *Consultancies*
- *Industry / trade associations*



# Sectors We Cover

- *Ayurvedic And Herbal Medicines, Herbal Cosmetics*
- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*





- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*





- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*



- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitality Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*



- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*



- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*



- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*



- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*

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