



Vidya Prasarak Mandal's
Maharshi Parshuram College of Engineering, Velneswar
 Hedvi-Guhagar road, At: Velneswar, Taluka: Guhagar,
 Dist: Ratnagiri (Maharashtra) 415 729
 (AICTE & DTE approved and affiliated to University of Mumbai)

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7.1.4 Environmental Consciousness and Sustainability		
7.1.4 Percentage of annual lighting power requirements met through LED bulbs		
Total Lighting requirements	Percentage Lighting through LED bulbs	Percentage Lighting through other sources
65.488 kW	3.8 kW = 5.8%	0.756 kW = 1.15%

Supporting documents:

Lighting load calculation

Sr. No.	Area	Type of lighting				
		Tube light 28 watts	LED 9 watts	LED 24 watts	CFL 9 watts	Bulb 9 watts
1	A1- library	36	-	-	-	-
2	A1- second floor, outside library	12	-	-	-	-
3	A1- first floor outside office area	24	-	-	-	-
4	A1- office area and First year department	217	-	-	-	-
5	A1- mechanical department	229	19	-	-	-
6	A1- lower ground floor	91	49 (Shripati Auditorium)	-	-	-
A1 total		609	68	-	-	-
7	B1- ground floor (EXTC department)	164	-	-	-	-
8	B1- first floor (Instrumentation department)	159	-	-	-	-
9	B1-second floor	92	-	-	-	-
B1 total		415	-	-	-	-
10	A2- ground floor	255	-	-	-	-

	(Civil department)					
11	A2- first floor (Electrical Department)	252	-	-	-	-
13	A2- corridor (including entrance and staircase)	30	-	-	-	-
A2 total		538	-	-	-	-
14	Gate office	13	-	-	-	1
15	Utility	52	-	-	1	-
16	Gym	32	-	-	18	-
17	Aparant guest house	20	12	-	24	-
18	VPM & Nana Phadanvis hall	79	-	-	40	-
19	Dnyaneshwari 1 (Hostel)	28	44	-	-	-
20	Dnyaneshwari 2	23	35	-	-	-
21	Dnyaneshwari 3	35	23	-	-	-
22	Dnyaneshwari 4	47	31	-	-	-
23	Dnyaneshwari 5	47	31	-	-	-
24	Teacher housing	168	72	3	-	-
25	Banwari workshop (Water tank to teacher housing road)	-	-	8	-	-
26	Gate office to VPM building	-	-	22	-	-
27	VPM building to hostel area	-	-	7	-	-
28	DG room and substation	22	-	-	-	-
29	Server room	23	8	-	-	-
In all MPCOE campus, total load =		2176 tubes	324 LED (9 watts)	40 street light LED (24 watts)	83 CFL (9 watts)	1 bulb (9 watts)

Total lighting load calculation

Total tube light wattage = $2176 \times 28 \text{ watts} = 60,928 \text{ watts}$

Total LED wattage = $(324 \times 9 \text{ watts} + 37 \times 24 \text{ watts}) = 3,804 \text{ watts}$

Total CFL wattage = $83 \times 9 \text{ watts} = 747 \text{ watts}$

Total bulb wattage = $1 \times 9 \text{ watts} = 9 \text{ watts}$

Total lighting load = 65,488 watts = 65 kW.

Percentage of lighting made by LED = $(\text{LED wattage} / \text{Total lighting wattage}) \times 100$

$$= (3,804 / 65,488) \times 100 = 5.8\%$$

Percentage of lighting made by other sources (CFL and bulb)

$$= (756 / 65,488) \times 100 = 1.15\%$$

Percentage of lighting made by (LED + Others)

$$= (4560 / 65,488) \times 100 = 6.96\%.$$

Some photographs:



Mechanical ground floor LED



Shripati Auditorium LED

Cosmic Electricals & Traders

Pooja theatre building, oppo. Chiplun Urban Bank, Main Road, Bazarpeth, Chiplun. 415 605.

Phone Number: 02355260005

E-Mail:devendra.cosmic@gmail.com

Ph/Mob.02355260005 GSTIN:27AHYPT3414G1ZU

TAX INVOICE

Original for Receipts
Duplicate for Supplier/Transporter
Triplicate for Supplier

Reverse Charge : No

Invoice No. : CEAT/2017/738

E-Way Bill No. : NA

P. O. No. : NA

Invoice Date : 21-01-2018

State : Maharashtra State Code : 27

Transportation Mode : NA

Vehicle No. : NA

Date of Supply : 21-01-2018

Place of Supply : 27-Maharashtra

Details of Receiver | Billed to:

Name : VIDYA PRASARAK MANDAL

Address : velneshwar,tal:guhagar

GSTIN : NA

State : Maharashtra State Code : 27

Details of Consignee | Shipped to:

Name : VIDYA PRASARAK MANDAL

Address : velneshwar,tal:guhagar

GSTIN : NA

State : Maharashtra State Code : 27

Sr. No	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discount	Taxable Value	CGST Rate %	CGST Amount	SGST Rate %	SGST Amount	Total
1	16SQ MM X 4CORE COPPER ARMD CABLE FINOLEX	8544	Mtr.	60.00	466.10	27966.10	0.00	27966.10	9.00	2516.95	9.00	2516.95	33000.00
2	4SQMM SOLAR CABLE COPPER POLYCAB	8544	Mtr.	200.00	42.37	8474.58	0.00	8474.58	9.00	762.71	9.00	762.71	10000.00
3	16X18 WAY DISTRIBUTION BOX SPN DOUBLE DOOR	8537	No.	1.00	550.85	550.85	0.00	550.85	9.00	49.58	9.00	49.58	650.00
4	4WAY MCB BOX PC NIZWA	8537	No.	1.00	101.69	101.69	0.00	101.69	9.00	9.15	9.00	9.15	120.00
5	63AMP 4POLE MCB L&T	8536.20.30	No.	1.00	1144.07	1144.07	0.00	1144.07	9.00	102.97	9.00	102.97	1350.00
6	63AMP BUSBAR 15X12X4 BHAIKAV 3PH	8536	No.	2.00	1788.14	3576.27	0.00	3576.27	9.00	321.86	9.00	321.86	4220.00
7	CROMPTON 360V N.V. COIL	85389000	No.	4.00	169.49	677.97	0.00	677.97	9.00	61.02	9.00	61.02	800.00
Total :					269.00	42491.53	0.00	42491.53	9.00	3824.24	9.00	3824.24	50140.00

Bank Name : BANK OF INDIA

Bank A/c No : 141120110000329

Bank Branch IFSC : BKID0001411

Invoice Amount : Fifty Thousand One Hundred and Forty Rs. Only.
(In Words)

Total Amount Before Tax :		42491.53	
Add : CGST :	3824.24	Add : SGST :	3824.24
Tax Amount : GST :		7648.47	
Disc % on Bill :	0.00	Disc Amt on Bill :	0.00
Round Off :		0.00	
Total Amount After Tax :		50140.00	
GST Payable on Reverse Charge :		0.00	

: Terms and Conditions :

* Payment within 30 days.

Certified that the particulars given above are true and correct.

FOR, Cosmic Electricals & Traders

Cosmic Electricals & Traders

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Phone Number: 02355260005

E-Mail:devendra.cosmic@gmail.com

Ph/Mob.02355260005 GSTIN:27AHYPT3414G1ZU

TAX INVOICE

Original for Recipients

Duplicate for Supplier/Transporter

Triplicate for Supplier

Reverse Charge : No Invoice No. : CEAT/2018-19/338 E-Way Bill No. : NA P. O. No. : NA Invoice Date : 12-06-2018 State : Maharashtra State Code : 27	Transportation Mode : NA Vehicle No. : NA Date of Supply : 12-06-2018 Place of Supply : 27-Maharashtra
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Details of Receiver Billed to:	Details of Consignee Shipped to:
Name : VIDYA PRASARAK MANDAL Address : velneshwar,tal:guhagar GSTIN : NA State : Maharashtra State Code : 27	Name : VIDYA PRASARAK MANDAL Address : velneshwar,tal:guhagar GSTIN : NA State : Maharashtra State Code : 27

Sr. No	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discount	Taxable Value	CGST		SGST		Total
									Rate %	Amount	Rate %	Amount	
1	MAGIC LED STREET LIGHT 24WATT	9405	No.	6.00	982.14	5892.86	0.00	5892.86	6.00	353.57	6.00	353.57	6600.00
2	45W SPIRAL CFL CROMPTON	85393110	No.	10.00	398.31	3983.05	0.00	3983.05	9.00	358.48	9.00	358.48	4700.00
3	5 STEP REGULATOR GW	8414	No.	31.00	152.54	4728.81	0.00	4728.81	9.00	425.59	9.00	425.59	5580.00
4	6AMP 3PIN SOCKET ANCHOR	8536	No.	60.00	23.73	1423.73	0.00	1423.73	9.00	128.14	9.00	128.14	1680.00
5	2.5MFD CAPACITOR HAVELLS	8532	No.	60.00	25.42	1525.42	0.00	1525.42	9.00	137.29	9.00	137.29	1800.00
6	9WATT LED BULB TEJAS WIPRO	9405	No.	35.00	107.14	3750.00	0.00	3750.00	6.00	225.00	6.00	225.00	4200.00
7	9WATT LED BULB CROMPTON	94054090	No.	15.00	107.14	1607.14	0.00	1607.14	6.00	96.43	6.00	96.43	1800.00
8	INSULATION TAPE BICON 9MTR	8546	No.	30.00	10.17	305.09	0.00	305.09	9.00	27.46	9.00	27.46	360.00
Total :						247.00		23216.10	0.00	23216.10	1751.95	1751.95	26720.00

Bank Name : BANK OF INDIA Bank A/c No : 141120110000329 Bank Branch IFSC : BKID0001411 Invoice Amount : Twenty-Six Thousand Seven Hundred and Twenty Rs. Only. (In Words)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Total Amount Before Tax :</td> <td colspan="2" style="text-align: right;">23216.10</td> </tr> <tr> <td>Add : CGST :</td> <td style="text-align: right;">1751.95</td> <td>Add : SGST :</td> <td style="text-align: right;">1751.95</td> </tr> <tr> <td colspan="2">Tax Amount : GST :</td> <td colspan="2" style="text-align: right;">3503.90</td> </tr> <tr> <td>Disc % on Bill :</td> <td style="text-align: right;">0.00</td> <td>Disc Amt on Bill :</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Round Off :</td> <td colspan="3" style="text-align: right;">0.00</td> </tr> <tr> <td colspan="2">Total Amount After Tax :</td> <td colspan="2" style="text-align: right;">26720.00</td> </tr> <tr> <td colspan="2">GST Payable on Reverse Charge :</td> <td colspan="2" style="text-align: right;">0.00</td> </tr> </table>	Total Amount Before Tax :		23216.10		Add : CGST :	1751.95	Add : SGST :	1751.95	Tax Amount : GST :		3503.90		Disc % on Bill :	0.00	Disc Amt on Bill :	0.00	Round Off :	0.00			Total Amount After Tax :		26720.00		GST Payable on Reverse Charge :		0.00	
Total Amount Before Tax :		23216.10																											
Add : CGST :	1751.95	Add : SGST :	1751.95																										
Tax Amount : GST :		3503.90																											
Disc % on Bill :	0.00	Disc Amt on Bill :	0.00																										
Round Off :	0.00																												
Total Amount After Tax :		26720.00																											
GST Payable on Reverse Charge :		0.00																											

: Terms and Conditions :

* Payment within 30 days.

Certified that the particulars given above are true and correct.

FOR, Cosmic Electricals & Traders

Cosmic Electricals & Traders

Pooja theatre building, oppo. Chiplun Urban Bank, Main Road, Bazarpeth, Chiplun. 415 605.

Phone Number: 02355260005

E-Mail:devendra.cosmic@gmail.com

Ph/Mob.02355260005 GSTIN:27AHYPT3414G1ZU

TAX INVOICE

Original for Receipts

Duplicate for Supplier/Transporter

Triplicate for Supplier

Reverse Charge : No Invoice No. : CEAT/2018-19/373 E-Way Bill No. : NA P. O. No. : NA Invoice Date : 20-06-2018 State : Maharashtra State Code : 27	Transportation Mode : NA Vehicle No. : NA Date of Supply : 20-06-2018 Place of Supply : 27-Maharashtra
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Details of Receiver Billed to:		Details of Consignee Shipped to:	
Name : VIDYA PRASARAK MANDAL	Name : VIDYA PRASARAK MANDAL		
Address : velneshwar,tal:guhagar	Address : velneshwar,tal:guhagar		
GSTIN : NA	GSTIN : NA		
State : Maharashtra State Code : 27	State : Maharashtra State Code : 27		

Sr. No	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discount	Taxable Value	CGST Rate %	CGST Amount	SGST Rate %	SGST Amount	Total
1	ASLON LED S/L 24WATTS	9405	No.	30.00	1071.43	32142.86	0.00	32142.86	6.00	1928.57	6.00	1928.57	36000.00
				Total :	30.00	32142.86	0.00	32142.86		1928.57		1928.57	36000.00

Bank Name : BANK OF INDIA	Total Amount Before Tax : 32142.86
Bank A/c No : 141120110000329	Add : CGST : 1928.57 Add : SGST : 1928.57
Bank Branch IFSC : BKID0001411	Tax Amount : GST : 3857.14
Invoice Amount : Thirty-Six Thousand Rs. Only. (In Words)	Disc % on Bill : 0.00 Disc Amt on Bill : 0.00
	Round Off : 0.00
	Total Amount After Tax : 36000.00
	GST Payable on Reverse Charge : 0.00

: Terms and Conditions :

* Payment within 30 days.

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TAX INVOICE

Original for Receipts

Duplicate for Supplier/Transporter

Triplicate for Supplier

Reverse Charge : No

Invoice No. : CEAT/2018-19/373

Invoice Date : 20-06-2018

State : Maharashtra State Code : 27

Transportation Mode : NA

Vehicle No. : NA

Date of Supply : 20-06-2018

Place of Supply : 27-Maharashtra

Details of Receiver | Billed to:

Name : VIDYA PRASARAK MANDAL

Address : velneshwar,tal:guhagar

GSTIN : NA

State : Maharashtra State Code : 27

Details of Consignee | Shipped to:

Name : VIDYA PRASARAK MANDAL

Address : velneshwar,tal:guhagar

GSTIN : NA

State : Maharashtra State Code : 27

Sr N	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discoun t	Taxable Value	CGST		SGST		Total
									Rate %	Amount	Rate %	Amount	
1	ASLON LED S/L 24WATTS	9405	No.	30.00	1071.43	32142.86	0.00	32142.86	6.00	1928.57	6.00	1928.57	36000.00
				Total	30.00	32142.86	0.00	32142.86		1928.57		1928.57	36000.00

Bank Name : BANK OF INDIA

Bank A/c No : 141120110000329

Bank Branch IFSC : BKID0001411

Invoice Amount : Thirty-Six Thousand Rs. Only.
(In Words)

Total Amount Before Tax :		32142.86	
Add : CGST :	1928.57	Add : SGST :	1928.57
Tax Amount : GST :		3857.14	
Disc % on Bill :	0.00	Disc Amt on Bill :	0.00
Round Off :			0.00
Total Amount After Tax :		36000.00	
GST Payable on Reverse Charge :		0.00	

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TAX INVOICE

Original for Receipts

Duplicate for Supplier/Transporter

Triplicate for Supplier

Reverse Charge : No
 Invoice No. : CEAT/2017/296
 E-Way Bill No. : NA
 P. O. No. : NA
 Invoice Date : 11-10-2017
 State : Maharashtra State Code : 27

Transportation Mode : NA
 Vehicle No. : NA
 Date of Supply : 11-10-2017
 Place of Supply : 27-Maharashtra

Details of Receiver | Billed to:

Name : VIDYA PRASARAK MANDAL
 Address : velneshwar,tal:guhagar
 GSTIN : NA
 State : Maharashtra State Code : 27

Details of Consignee | Shipped to:

Name : VIDYA PRASARAK MANDAL
 Address : velneshwar,tal:guhagar
 GSTIN : NA
 State : Maharashtra State Code : 27

Sr. No	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discount	Taxable Value	CGST		SGST		Total
									Rate %	Amount	Rate %	Amount	
1	24WATT LED STREET LIGHT PRIDE (WHT)	94052090	No.	10.00	982.14	9821.43	0.00	9821.43	6.00	589.29	6.00	589.29	11000.00
2	63AMP 4POLE ELCB+MCB 4POLE 100MA	8536.20.90	No.	2.00	2343.75	4687.50	0.00	4687.50	14.00	656.25	14.00	656.25	6000.00
Total :				12.00		14508.93	0.00	14508.93		1245.54		1245.54	17000.00



Tubelights for Hostel
 solar work
 Street light work

Bank Name : BANK OF INDIA
 Bank A/c No : 141120110000329
 Bank Branch IFSC : BKID0001411
 Invoice Amount : Seventeen Thousand Rs. Only.
 (In Words)

Total Amount Before Tax :		14508.93	
Add : CGST :	1245.54	Add : SGST :	1245.54
Tax Amount : GST :		2491.07	
Disc % on Bill :	0.00	Disc Amt on Bill :	0.00
Round Off :			0.00
Total Amount After Tax :		17000.00	
GST Payable on Reverse Charge :		0.00	

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Ph/Mob.02355260005 GSTIN:27AHYPT3414G1ZU

TAX INVOICE

Original for Receipts

Duplicate for Supplier/Transporter

Triplicate for Supplier

Reverse Charge : No
 Invoice No. : CEAT/2017/572
 E-Way Bill No. : NA
 P. O. No. : NA
 Invoice Date : 17-12-2017
 State : Maharashtra State Code : 27

Transportation Mode : NA
 Vehicle No. : NA
 Date of Supply : 17-12-2017
 Place of Supply : 27-Maharashtra

Details of Receiver | Billed to:

Name : VIDYA PRASARAK MANDAL
 Address : velneshwar,tal:guhagar
 GSTIN : NA
 State : Maharashtra State Code : 27

Details of Consignee | Shipped to:

Name : VIDYA PRASARAK MANDAL
 Address : velneshwar,tal:guhagar
 GSTIN : NA
 State : Maharashtra State Code : 27

Sr. No	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discount	Taxable Value	CGST Rate %	CGST Amount	SGST Rate %	SGST Amount	Total
1	12WATT LED BULB GARNET WIPRO WHT	9405	No.	17.00	178.57	3035.71	0.00	3035.71	6.00	182.14	6.00	182.14	3400.00
2	28WATT T5 TUBE CROMPTON WHT	8539	No.	50.00	93.22	4661.02	0.00	4661.02	9.00	419.49	9.00	419.49	5500.00
Total :				67.00		7696.73	0.00	7696.73		601.63		601.63	8900.00

Bank Name : BANK OF INDIA
 Bank A/c No : 141120110000329
 Bank Branch IFSC : BKID0001411
 Invoice Amount : Thirteen Thousand Five Hundred Rs. Only.
 (In Words)

Total Amount Before Tax :		11803.87	
Add : CGST :	848.06	Add : SGST :	848.06
Tax Amount : GST :		1696.13	
Disc % on Bill :	0.00	Disc Amt on Bill :	0.00
Round Off :			0.00
Total Amount After Tax :		13500.00	
GST Payable on Reverse Charge :		0.00	

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TAX INVOICE

Original for Receipts

Duplicate for Supplier/Transporter

Triplicate for Supplier

Reverse Charge : No
 Invoice No. : CEAT/2018-19/1024
 E-Way Bill No. : NA
 P. O. No. : NA
 Invoice Date : 15-02-2019
 State : Maharashtra State Code : 27

Transportation Mode : NA
 Vehicle No. : NA
 Date of Supply : 15-02-2019
 Place of Supply : 27-Maharashtra

Details of Receiver | Billed to:

Name : VIDYA PRASARAK MANDAL
 Address : velneshwar,tal:guhagar
 GSTIN : NA
 State : Maharashtra State Code : 27

Details of Consignee | Shipped to:

Name : VIDYA PRASARAK MANDAL
 Address : velneshwar,tal:guhagar
 GSTIN : NA
 State : Maharashtra State Code : 27

Sr. No	Name of Product / Service	HSN SAC	UOM	Qty	Rate	Amount	Less Discount	Taxable Value	CGST Rate %	CGST Amount	SGST Rate %	SGST Amount	Total
1	ASLON LED S/L 24WATTS	9405	No.	6.00	1071.43	6428.57	0.00	6428.57	6.00	385.71	6.00	385.71	7200.00
2	LIONIA FLOOD LIGHT 50WATT	9405	No.	3.00	1696.43	5089.29	0.00	5089.29	6.00	305.36	6.00	305.36	5700.00
3	LIONIA FLOOD LIGHT 100WATT WHT	9405	No.	2.00	2946.43	5892.86	0.00	5892.86	6.00	353.57	6.00	353.57	6600.00
Total :				11.00		17410.71	0.00	17410.71		1044.64		1044.64	19500.00

Bank Name : BANK OF INDIA
 Bank A/c No : 141120110000329
 Bank Branch IFSC : BKID0001411
 Invoice Amount : Nineteen Thousand Five Hundred Rs. Only.
 (In Words)

Total Amount Before Tax	:	17410.71
Add : CGST	1044.64	Add : SGST : 1044.64
Tax Amount : GST	:	2089.28
Disc % on Bill :	0.00	Disc Amt on Bill : 0.00
Round Off	:	0.00
Total Amount After Tax	:	19500.00
GST Payable on Reverse Charge :		0.00

: Terms and Conditions :

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