

**DEVELOPMENT OF ELECTRONIC BALLAST FOR THE LIGHT  
EMITTING DIODE (LED) LIGHTING SYSTEM**

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In the name of ALLAH, the most kind and merciful and praise be upon the prophet MUHAMMAD S.A.W

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## **ABSTRACT**

This paper describes a study and designs of electronic ballast which suitable to be used with light emitting diode (LED) as lighting system. The ballast can be operated with multi functions which are as charger and LED driver. The converter circuit need for this ballast is study and test. This system is design to replace the portable generator that commonly used by night market seller. The portable generator has more disadvantages other than advantages. The portable generator causes the air and noise pollution to the environment. Other than that, the operating and maintenance cost also high since it use fuel as working medium and engine to generate electricity. So this ballast is design to overcome this problem. This system use battery as working medium so instead of operates as driver to LED, this ballast also working as charger to charge the battery. Since the battery is used for supply the power, the conventional light bulb cannot be used as lighting system because it consumes large power to operate. So LED is choose as lighting system because it use less power to operate and produce light that comfortable to human eye.

Keywords – LED, Converter Circuit, Electronic Ballast, Portable Generator

## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
Acknowledgement	i
Abstract	ii
Table of Contents	iii
List of Figures	v
List of Tables	vii
List of Abbreviations	viii
<b>CHAPTER 1: INTRODUCTION</b>	
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	3
1.4 Significant of the project	3
1.5 Scope of Project	4
1.6 Thesis organization	4
<b>CHAPTER 2: LITERATURE REVIEW</b>	
2.1 Electronic Ballast Overview	6
2.1.1 Introduction	6
2.1.2 Type of Ballast	7
2.1.3 Electronic Ballast Efficiency	8
2.1.4 Performance Parameter	9
2.1.5 Advantages of Electronic Ballast	10
2.2 Hardware Components	11
2.2.1 Battery	11
2.2.1.1 Introduction	11
2.2.1.2 Charging Characteristic	12
2.2.1.3 Discharging Characteristic	12

2.2.2	Transformer	13
2.2.3	Rectifier	14
2.2.4	Voltage Regulator	15
2.2.5	Light Emitting Diode	17
<b>CHAPTER 3: METHODOLOGY</b>		
3.1	Introduction	18
3.2	Operation	18
3.3	Project Methodology	19
3.2.1	Simulation	21
3.2.1.1	Charger Circuit Simulation	22
3.2.1.2	LED Driver Circuit Simulation	23
3.2.1.3	Full Circuit Connection	24
3.2.2	Test with Breadboard	25
3.2.3	Prototyping	27
3.4	Measurement Instrument	30
<b>CHAPTER 4: RESULTS AND DISCUSSION</b>		
4.1	Introduction	31
4.2	Hardware Results	31
4.3	Ballast Characteristic	33
4.3.1	Charger Results	33
4.3.2	Discharged Results	36
<b>CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS</b>		
5.1	Conclusions	39
5.2	Recommendations	40
REFERENCES		41
APPENDICES		43