



# *TPS40211 (MR-16) Reference Design*

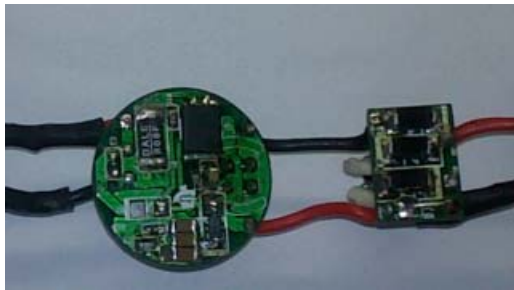
*May-26th, 2009*

*Gary Chen*

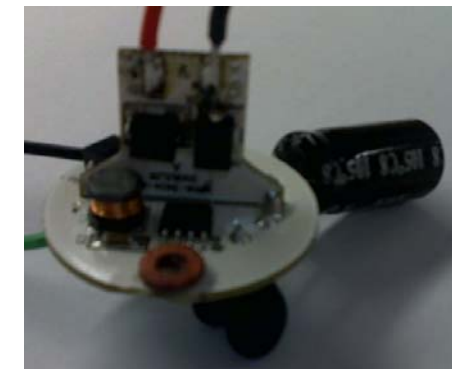
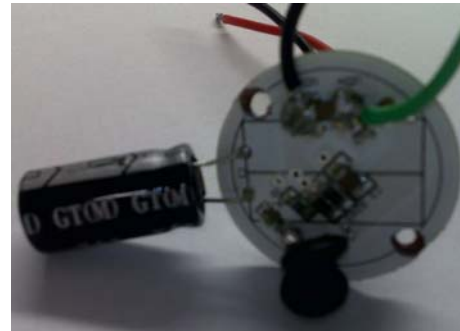
# TI vs NS solution Comparison

|          | TI       | NS     |
|----------|----------|--------|
| IC       | TPS40211 | LM3404 |
| Topology | SEPIC    | BUCK   |

TI Solution:



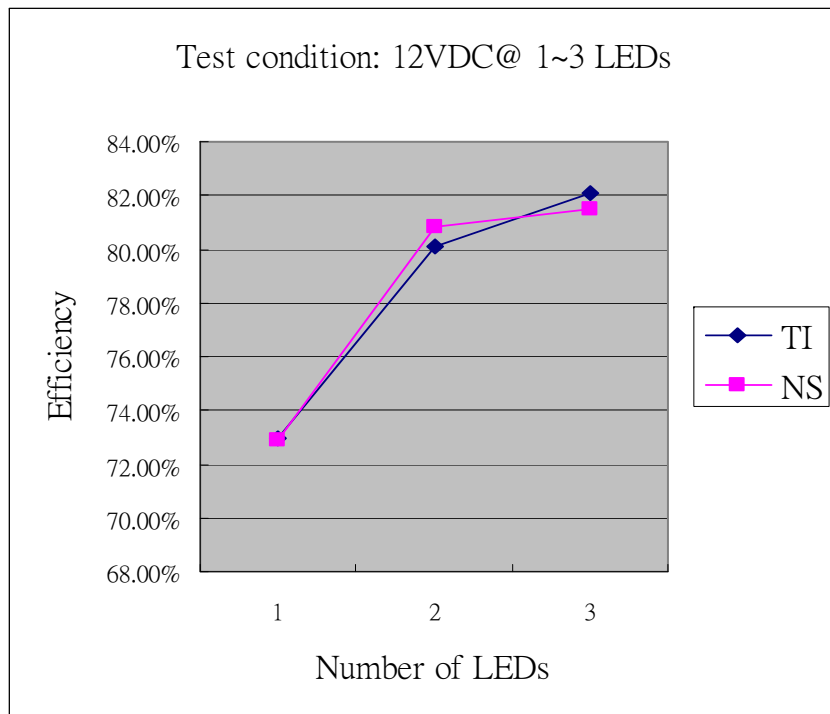
NS Solution:



# Efficiency Comparison

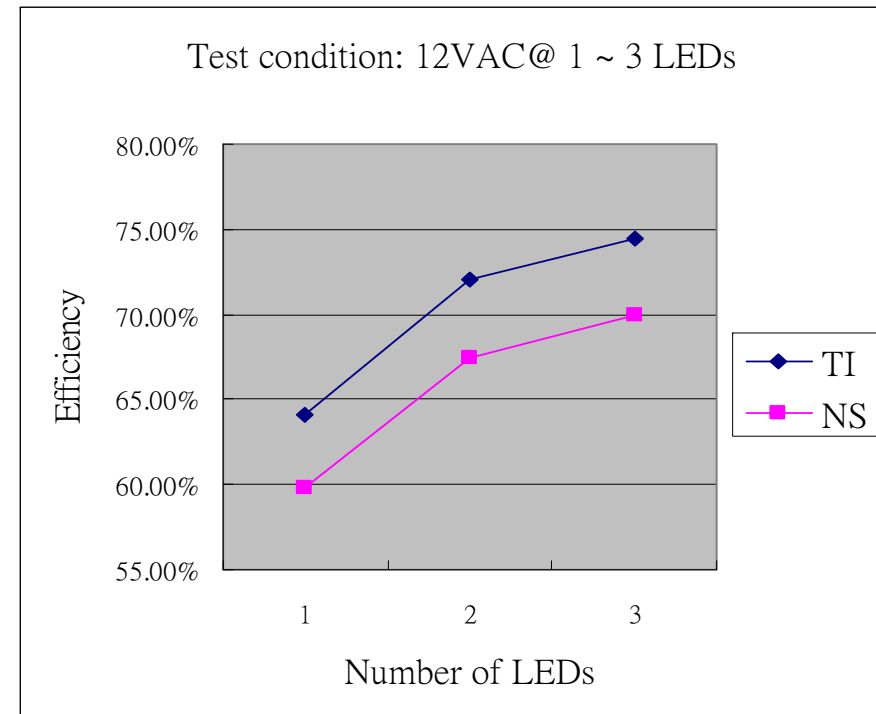
## 12VDC Input:

| LED | TI     | NS     |
|-----|--------|--------|
| 1   | 72.98% | 72.88% |
| 2   | 80.11% | 80.85% |
| 3   | 82.08% | 81.46% |



## 12VAC Input: (AC Electronic Transformer)

| LED | TI     | NS     |
|-----|--------|--------|
| 1   | 64.14% | 59.79% |
| 2   | 72.06% | 67.42% |
| 3   | 74.50% | 69.94% |



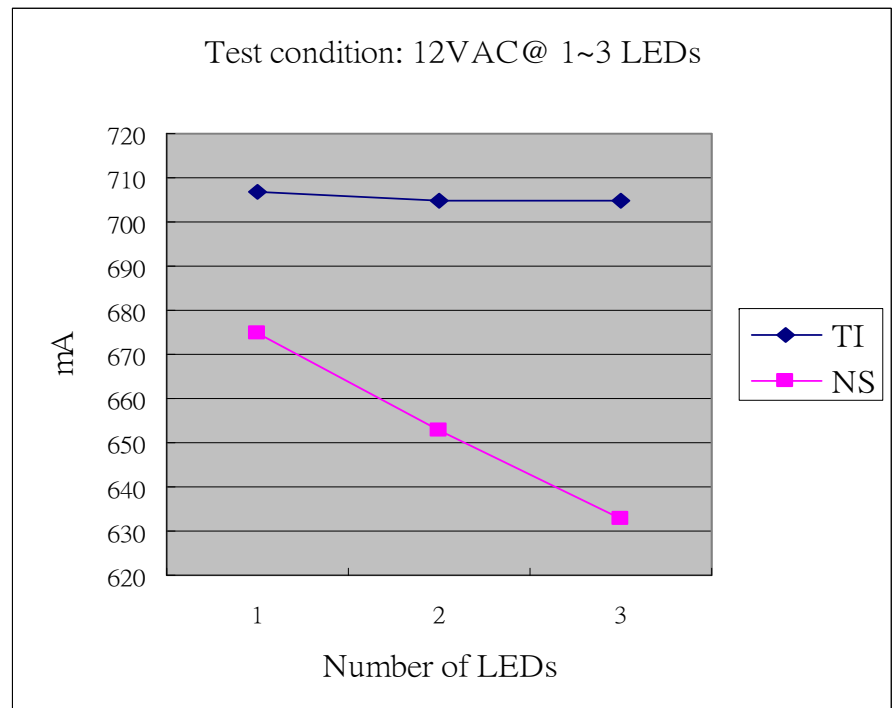
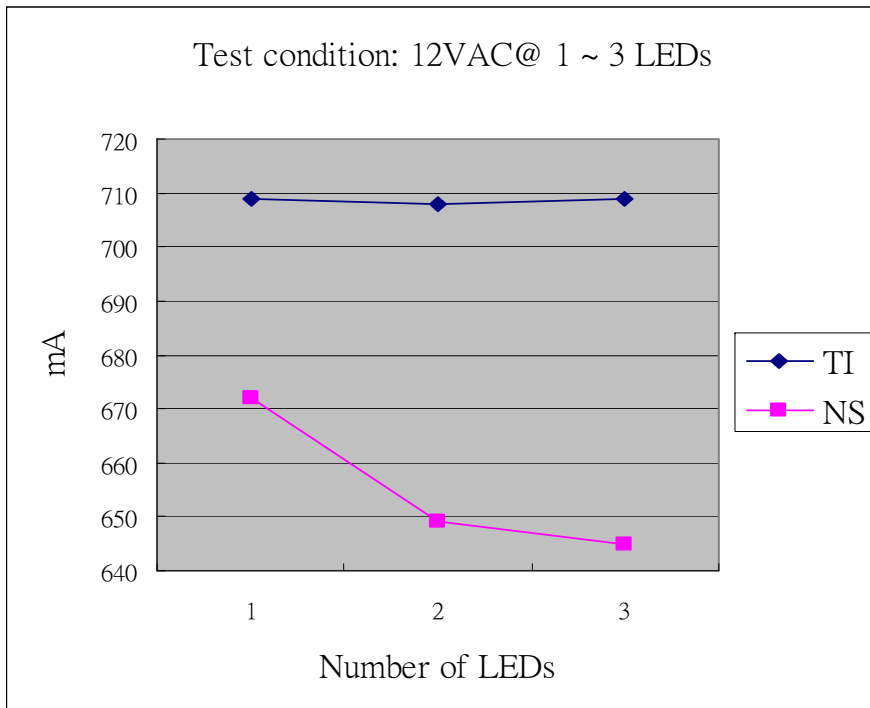
# Output Current Accuracy

12VDC Input:

| LED | TI    | NS    |
|-----|-------|-------|
| 1   | 709mA | 672mA |
| 2   | 708mA | 649mA |
| 3   | 709mA | 645mA |

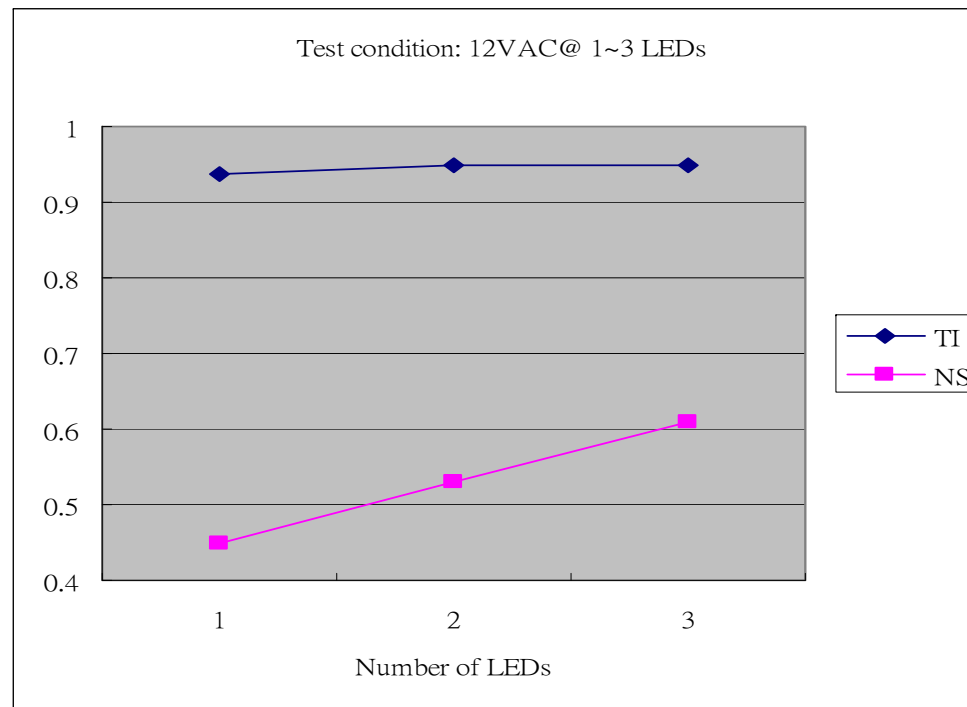
12VAC Input:

| LED | TI    | NS    |
|-----|-------|-------|
| 1   | 707mA | 675mA |
| 2   | 705mA | 653mA |
| 3   | 705mA | 633mA |



# 12VAC Input Power Factor (PF)

| LED | TI    | NS   |
|-----|-------|------|
| 1   | 0.937 | 0.45 |
| 2   | 0.948 | 0.53 |
| 3   | 0.949 | 0.61 |



# Input Current Waveform

| LED | TI    | NS    |
|-----|-------|-------|
| 1   | 1.52A | 6.5A  |
| 2   | 1.91A | 9.4A  |
| 3   | 2.14A | 11.2A |

